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PROCEEDINGS: CONFERENCE IN THE MATTER OF POLLUTION OF THE INTERSTATE WATERS OF LAKE TAHOE AND ITS TRIBUTARIES, HELD AT STATELINE, NEVADA ON JULY 18-20, 1966. VOLUME 1

Federal Water Pollution Control Administration
Washington, D. C.

1966

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Conference in the Matter of Pollution of the Interstate Waters of the Lake Tahoe and its Tributaries, California and Nevada, convened at 9:30 a.m., Monday, July 18, 1966, at Harvey's Wagon Wheel, Stateline, Nevada.

PRESIDING:

Mr. Murray Stein, Assistant Commissioner for Enforcement, Federal Water Pollution Control Administration, Department of the Interior, Washington, D.C.

Mr. James M. Quigley, Commissioner, Federal Water Pollution Control Administration, Department of the Interior, Washington, D.C.

CONFEREES:

Hugo Fisher, Resources Agency of California, Sacramento, California

Wallace W. White, Director, Nevada Department of Public Health and Welfare, Carson City, Nevada

William B. Schreeder, Regional Director, Southwest Region, Federal Water Pollution Control Administration, Department of the Interior, San Francisco, California

PARTICIPANTS:

Lester Breslow, M.D., Director of Public Health, California State Department of Health, Berkeley, California

Honorable Edmund G. Brown, Governor of the State of California

Hubert Bruns, Chairman, Board of Supervisors of Alpine County, Fredericksburg, California

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PARTICIPANTS (Continued):

Honorable Chester A. Christensen, Mayor, Sparks, Nevada

William Davoren, Pacific Southwest Field Coordinator, Department of Interior, San Francisco, California

Randolph DeWante, DeWante & Stowell Engineers, Sacramento, California

Hugo Fisher, Administrator, The Resources Agency of California, Sacramento, California

George S. Gatter, Executive Director, The League to Save Lake Tahoe, San Francisco, California

Irving Goldfeder, Chairman, California State Water Quality Control Board, Sacramento, California

W. F. Grader, Deputy Administrator, Resources Agency of California, Sacramento, California

Richard Graves, Chairman, Lake Tahoe Joint Study Committee, Los Angeles, California

David B. Henry, City Manager, Sparks, Nevada

Phil Hiibel, Manager, Truckee-Carson Irrigation District, Fallon, Nevada

Richard R. Kennedy, Kennedy Engineers, San Francisco, California

Glen Laurgaard, Region 2, Bureau of Reclamation, Department of Interior, Sacramento, California

Douglas R. Leisz, Forest Supervisor, El Dorado National Forest, United States Forest Service, Department of Agriculture, Placerville, California

John T. Leggett, Executive Officer, Lahonton Regional Water Quality Control Board, Bishop, California

PARTICIPANTS (Continued):

Francis Longo, Member, Lahontan Regional Water Quality Control Board, Bishop, California

K. M. Mackenthun, Federal Water Pollution Control Administration, Department of the Interior, Cincinnati, Ohio

Milton Manoukian, Attorney, Douglas County Sewer Improvement District No. 1, Zephyr Cove, Nevada

Albert Marino, Director of Sanitation, Placer County Health Department, Auburn, California

Charles E. Martin, Executive Director, Lake Tahoe Area Council, Al Tahoe, California

Percy H. McGauhey, Chairman, Board of Consultants, Lake Tahoe Area Council, Richmond, California

Howard McKissick, Vice Chairman, Board of County Commissioners, Washoe County, Reno, Nevada

Harlan Moyer, District Engineer and Acting General Manager, South Tahoe Public Utility District

Reginald C. Price, Deputy Director, Policy, California Department of Water Resources, Sacramento, California

James M. Quigley, Commissioner, Federal Water Pollution Control Administration, Department of Interior

Honorable Grant Sawyer, Governor of the State of Nevada

Frank Stead, Chief, Division of Environmental Sanitation, California State Department of Public Health

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PARTICIPANTS (Continued):

Dr. Stephen Teale, State Senator, California

Irving Terzich, Sanitary Engineer, Southwest Regional Office, Federal Water Pollution Control Administration, Department of the Interior, San Francisco, California

John R. Thompson, Director of Sanitation, El Dorado County Health Department, Placerville, California

Thomas J. Trelease, Chief of Fisheries, Nevada Fish and Game Commission, Reno, Nevada

Wallace W. White, Director, Nevada Department of Public Health and Welfare, Carson City, Nevada

J. D. Wood, Executive Secretary, Board of County Commissioners, Churchill County, Nevada

OTHERS IN ATTENDANCE:

Orville Abbott, Supervising Engineer, California Department of Water Resources, Sacramento, California

Louis B. Allen, Jr., Consultant, California Senate Water Committee, Sacramento, California

Donald R. Anderson, Civil Engineer, Engineering Science, Inc., Oakland, California

Mason Anderson, Asst. Chief, Department of Finance, State of California, Sacramento, California

Leonard A. Anker, Soil Conservation Service, Gardnerville, Nevada

James L. Appleton, Supervising Engineer, Bechtel Corporation, San Francisco, California

Nancy Barker, Student, Tahoe Truckee High School, Truckee, California

George C. Baron, Vice President, Tahoe Paradise Water and Gas Company, Tahoe Paradise, California

Robert B. Bond, Executive Director, California-Nevada Interstate Compact Commission, Sacramento, California

Bill Boquist, San Francisco Examiner

Bertram G. Buzzini, California Deputy Attorney General, Sacramento, California

Gay Callan, Student, Tahoe Truckee High School, Truckee, California

Gene Chappie, State Assemblyman, Cool, California

Lorne Christopherson, Asst. Vice President, Dillingham Corporation of California, Tahoe Valley, California

Robert Ayers, Executive Secretary for FWPC Advisory Board

OTHERS IN ATTENDANCE (Continued):

Norman R. Chupp, Field Supervisor, U.S. Bureau of Sport Fisheries and Wildlife, Sacramento, California

Sue Clackett, Student, Tahoe-Truckee High School, Truckee, California

Don Clarke, Councilman, City of South Lake Tahoe, Tahoe Valley, California

Gene F. Cole, Watershed Specialist, U.S. Forest Service, Reno, Nevada

Cheri Comola, Student, Tahoe-Truckee High School, Truckee, California

Carol Corbin, Student, Tahoe-Truckee High School, Truckee, California

Russell L. Culp, Principal, Nornell, Fowland, Hayes & Merryfield, Corvallis, Oregon

Robert J. Daneri, Director, North Tahoe Utility Board, Kings Beach, California

Linda Davidson, Student, Tahoe-Truckee High School, Truckee, California

Ray Dunham, Fisheries Management Supervisor, California Department of Fish and Game, Sacramento, California

Guy Fairchild, Supervising Engineer, State Department of Water Resources, Sacramento, California

Robert W. Fesler, Chairman of Board, South Tahoe Public Utility District, Bijou, California

Victor and Mildred Filiberti, Fish and Game Headquarters, Sonora, California

Gilbert W. Fraga, Senior Water Quality Control Board, Sacramento, California

Dr. Rolf Eliasson, Stanford University, California

OTHERS IN ATTENDANCE (Continued):

Mrs. G. W. Fraga, Private Citizen, Sacramento, California

Edward J. Francis, General Manager, North Tahoe Public Utility District, Tahoe Vista, California

Henry D. Greene, Executive Manager, FeatHer River Project Association, Glendale, California

Ernest G. Gregory, Chief, Bureau of Environmental Health, Nevada Division of Health, Reno, Nevada

Kamini K. Gupta, Private Citizen, San Francisco, California

Ruth Church Gupta, Member, State of California Water Quality Control Board, San Francisco, California

Terry Hanna, Student, Tahoe-Truckee High School, Truckee, California

R. W. Hart, Associated Regional Health Director, Public Health Service, DHEW, San Francisco, California

George C. Hastings, Civil Engineer, Bureau of Reclamation, Carson City, Nevada

Edward E. Hegarty, Director, South Tahoe Public Utility District, Al Tahoe, California

Denise Henrikson, Student, Tahoe-Truckee High School, Truckee, California

Alfred A. Hodder, Manager, Truckee Sanitary District, Truckee, California

Walter Hofmann, District Chief, California U.S. Geological Survey, Menlo Park, California

Mr. DeAngelo, Engineer, Douglas County Sewer Improvement District No. 1, Zephyr Cove, Nevada

OTHERS IN ATTENDANCE (Continued):

Robert L. Jones, Deputy Director, California Department of Fish and Game, Sacramento, California

Robert R. Karrasch, Director of Environmental Health, District Health Department, Reno, Nevada

F. W. Kittrell, Chief, Pollution Evaluation, Federal Water Pollution Control Administration, Cincinnati, Ohio

Mary A. Kortes, Reporter, San Francisco Chronicle

Walter P. Kashuba, Vice Chairman, South Tahoe Planning Commission, Bijou, California

Lloyd Krause, Private Citizen, Los Altos, California

Alvin Landis, Attorney, El Dorado County Water Agency, Sacramento, California

Lois Larson, Secretary, Lake Tahoe Area Council, Al Tahoe, California

William B. Layton, Jr., Manager, Tahoe City Public Utility District, Tahoe City, California

Harvey F. Ludwig, Consulting Engineer, Engineering-Science, Inc., Arcadia, California

Charles E. Martin, Executive Director, Lake Tahoe Area Council, Al Tahoe, California

Kim Marvin, Student, Tahoe-Truckee High School, Truckee, California

Fred R. McLaren, Associate Engineer, Lahontan Regional Water Quality Control Board, Bijou, California

OTHERS IN ATTENDANCE (Continued):

George Melikean, Sr., Director, South Tahoe Public Utility District, Tahoe Valley, California

Kathy Miles, Student, Tahoe-Truckee High School, Truckee, California

Robert D. Montgomery, Regional Manager, Region 2, California Department of Fish and Game, Sacramento, California

James M. Morris, Jr., Supervising Engineer, California Department of Water Resources, Sacramento, California

William J. Newman, Engineer, Division of Water Resources, Carson City, Nevada

W. J. O'Connell, Consultant, Senate Fact Finding Committee on Water Resources and Southwest Contra Costa County Water District, Burlingame, California

Toni Osborn, Student, Tahoe-Truckee High School, Truckee, California

Bill Pillsbury, Office Manager, Murray & McCormick, Tahoe Valley, California

Paul Reimer, Vice President, George S. Nolte Consulting Engineers, Palo Alto, California

Donald M. Richardson, Assistant Director, Lake Tahoe Area Council, Al Tahoe, California

James B. Ruch, Information Officer, California Department of Fish and Game, Sacramento, California

Linda Russell, Student, Tahoe-Truckee High School, Truckee, California

OTHERS IN ATTENDANCE (Continued):

Samuel Scicchitano, Attorney, Department of Water Resources, Sacramento, California

Gordon E. Seck, M.D., Health Officer - Placer County, Auburn, California

Harry G. Sharp, Jr., Director, New Bureau, Chamber of Commerce, South Lake Tahoe, California

Ron Smith, Student, Tahoe-Truckee High School, Truckee, California

Ernest P. Snyder, Biologist, Bureau of Sport Fisheries & Wildlife Sacramento, California

Alice L. Sorensen, Director, North Tahoe Public Utility, Tahoe Vista, California

Frederick G. Styles, Resources Planning Coordinator, Resources Agency, State of California, Sacramento, California

John R. Thompson, Director of Sanitation, El Dorado County Health District, Placerville, California

Frank Torkelson, Budget Analyst, State of California, Sacramento, California

Gary Water, Student, Tahoe-Truckee High School, Truckee, California

Murray A. Wesgate, News Director, Broadcasters News-Time-Life Broadcast, Sacramento, California

Hugo W. Wilde, State Water Quality Control Board, Rialto, California

John T. Williams, City Manager, City of South Lake Tahoe, California

John D. Winters, Member, Nevada-California Compact Commission, Dayton, Nevada

Kenneth Simpson, Washoe County, Nevada

OTHERS IN ATTENDANCE (Continued):

Robert Wright, Department of Water Resources, Sacramento, California

G. F. Worts, Jr., District Chief, Nevada Water Resources District, U. S. Geological Survey, Carson City, Nevada

Paul Bonderson

A. W. West, Technical Sanitary Engineers Center at Cincinnati

Robert DeNeary, Director of the North Tahoe District

APPENDICES:

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Report on Pollution in the Lake Tahoe Basin - July 1966, by A. W. West and K. M. Mackenthun, Federal Water Pollution Control Administration, U. S. Department of the Interior

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Lake Tahoe Basin, Water Quality Survey-1961, Bureau of Sanitary Engineering, California State Department of Public Health

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The Draft California-Nevada Compact: Comments of the Department of the Interior

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1. Additional Statement by Region 2, Bureau of Reclamation, U.S. Department of the Interior, Sacramento, California

2. Statement of the Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior, Portland, Oregon

3. Statement of Frank E. Sylvester, Regional Director, Bureau of Outdoor Recreation, U.S. Department of the Interior, San Francisco, California

4. Statement of the Soil Conservation Service, U.S. Department of Agriculture, Reno, Nevada

5. Statement of Honorable Eugene Chappie, Assemblyman, California District 6, Cool, California

PROCEEDINGS

OPENING STATEMENT

BY

MR. MURRAY STEIN

CHAIRMAN STEIN: The conference is open. In the interest of saving time and expediting the proceeding, we are opening the conference now before we may expect the arrival of the Governors of California and Nevada -- as I say, in the interest of saving their time when they arrive. I think Commissioner James Quigley, the Commissioner of the Federal Water Pollution Control Administration, may be with the Governor of California. When these people arrive, we will turn the conference over to the Governors so that we can expedite the proceeding. As soon as possible, after Commissioner Quigley is here and we see what his schedule is, we would be delighted to get together with the California and Nevada conferees and do the best we can to work out a tentative time schedule, so you will know when you can make your presentation.

Just very briefly, we will turn this over to California and Nevada to manage their own time. The conferees sitting with me now are Mr. Irving Goldfeder, who is here from California as Chairman of the State Water Quality Control Board. I understand Mr. Hugo Fisher will be Conferee for California when he arrives.

Mr. Wallace White of Nevada is the Conferee for Nevada. Mr. William Schreeder of the Federal Water Pollution Control Administration, Southwest Regional Office, is the Conferee for the Federal Government. My name is Murray Stein and I am from Headquarters, Washington, D. C., and have been named Chairman of the Conference and representative of Secretary Udall.

This conference in the matter of pollution of the interstate waters of Lake Tahoe and its tributaries involving the States of California and Nevada and the Federal Water Pollution Control Administration is being held under the provisions of Section 10 of the Federal Water Pollution Control Act. The Secretary of the Interior is required to call a conference of this type when, on the basis of reports, surveys, or studies, he has reason to believe that pollution of the interstate waters subject to abatement under the Federal Act is occurring.

The purpose of the conference is to bring together the State water pollution control agencies, representatives of the Federal Water Pollution Control Administration and other interested parties to review the existing pollution situation, to appraise what has been done, to correct the situation so far, to lay a basis for future action, and give the states and localities an opportunity to take whatever remedial action is possible and practicable under state and local law.

The conference technique is rather an old one. It is used informally by many State agencies in the normal conduct of their business in the field of water pollution control. The concept of the conference system was proposed by the United States Supreme Court as long ago as 1921 in the famous case of New York versus New Jersey, involving interstate pollution. I would like to quote briefly from this decision.

"We cannot withhold the suggestion, inspired by the consideration of this case, that the grave problem of sewage disposal by the large and growing population living on the shores of New York Bay is one more readily to be most wisely solved by cooperative study and by conference and mutual concession on the part of representatives of the States so vitally interested in it than by proceedings in any court however constituted."

We strongly support the conference technique and we measure our success by the problems which are solved at the conference stage, rather than by the court actions we bring.

As many of you know, I bring you greetings from the Department of the Interior. We have been newly transferred to the Department of the Interior. I find it a very exciting place to work. We have a very dynamic Secretary and maybe you will find this as exciting as I do.

As specified in Section 10 of the Federal Water Pollution Control Act, the Secretary of the Interior had notified the official state water pollution control agencies of this conference. These agencies are the California State Water Quality Control Board and the Nevada State Department of Health and Welfare. California will be represented by Mr. Hugo Fisher, and we have indicated who the other conferees are.

The representative of the official agencies are privileged to bring whomever they wish to the conference and have them participate in it. However, this is a conference between the State representatives and the representatives of the Department of the Interior, and these parties constitute the conferees.

Opening Statement - Mr. Stein

Both the States and the Federal Government have responsibilities in dealing with interstate water pollution control problems. The Federal Water Pollution Control Act declares that the States have primary rights and responsibilities for taking action to abate and control interstate pollution. It has always been the policy of the Department of the Interior to give full recognition to this traditional role of the states. The function of the Department is to encourage the states in these activities.

At the same time, the Secretary of the Interior is charged by law with specific responsibilities in water pollution control. The Federal Water Pollution Control Act provides that pollution of interstate waters, whether the matter causing or contributing to such pollution is discharged directly into such waters or reaches such waters after discharge into a tributary of such waters, which endangers the health or welfare of persons in a state other than that in which the discharges originate, is subject to abatement.

The pollution problems we face on Lake Tahoe are particularly urgent. We are dealing here with one of the most famed, most luxurious recreation spots of the Nation. We are dealing with a region whose wealth, and it is a great wealth relative to its small size, has been dependent on an extraordinary endowment of natural beauty.

It is absolutely mandatory that we end forever the pollution of Lake Tahoe, in order to protect both a regional economy and a national treasure. So far we have only had a brief glimpse into what the damages of Tahoe's pollution would be. Pollution in Lake Tahoe is still in its early stages, but we can already see that the time to stop it is now.

This conference will be useful, we hope, in providing a clear picture of the problem, its extent, the damages now occurring and the damages which may result in the future. We must delineate the progress which has already been made and indicate what needs to be done further to reverse the pollution of these waters.

All the conferees will be called upon to make statements. The conferees, in addition, may call upon participants whom they have invited to the conference to make statements. At the conclusion of the statements, the conferees will be given an opportunity to comment or ask questions, and at the conclusion of the conferees' comments or questions, I may ask a question or two. This procedure has in the past proven effective in developing a clear statement of the problem and in reaching equitable solutions.

At the end of all the statements, we will have a discussion among the conferees and try to arrive at a basis of agreement on the facts of the situation. Then we will attempt to summarize the conference orally, giving the conferees, of course, the right to amend or modify the summary. However, if time permits and the conferees agree at the executive session we will develop a written statement which may be handed out at that time.

Under the Federal law, the Secretary of the Interior is required, at the conclusion of the conference, to prepare a summary of it which is sent to all the conferees. The summary, according to law, must cover the following points:

(1) Occurrence of pollution of interstate waters subject to abatement under the Federal Act;

(2) Adequacy of measures taken toward abatement of pollution; and

(3) Nature of delays, if any, being encountered in abating the pollution.

And for Lake Tahoe I would like to point out that the phrase in the Federal Act says "endangers the health and welfare of persons." "Endanger" means to put in peril. I think for Lake Tahoe that may be significant, since it is in danger of pollution in the future and therefore comes within the scope of Federal law.

The Secretary is also required to make recommendations for remedial action if such recommendations are indicated.

Now, a word about the procedure governing the record of the Conference. A record and verbatim transcript is being made and this is for the purpose of aiding and preparing a summary, and is providing the complete record of what is said here. We will make copies of it available to the official water pollution control agencies of California and Nevada. We have found that generally it is best that people who wish transcripts should request them through their State agencies rather than directly from the Federal Government. This maintains a normal relationship of the people with the State.

I would suggest that all the speakers and participants other than the Conferees come to the lectern and identify themselves for the purpose of the record before making statements.

Now, I would like to turn this over to Mr. Schreeder for the Federal presentation. Will you please make the introductions? Before you get started, I think I did see Mr. Quigley. Why don't you introduce some of the people who are here from our organization? I will see Mr. Quigley and ascertain how to handle this. Thank you.

MR. SCHREEDER: I am Bill Schreeder, Regional Director of the Federal Water Pollution Control Administration. In the back of the room is Mr. Bob Ayers, Executive Secretary for the Federal Water Pollution Control Advisory Board. Mr. Irving Terzich, Regional Enforcement Program Representative from San Francisco.

CHAIRMAN STEIN: I would like to introduce the California Conferee, Mr. Hugo Fisher. Would you please come up, Mr. Fisher?

I am delighted at this time to present the Commissioner of the Federal Water Pollution Control Administration, Mr. James M. Quigley. I would like to turn the meeting over to Mr. Quigley. Mr. Quigley?

STATEMENT OF JAMES M. QUIGLEY, COMMISSIONER OF THE FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

MR. QUIGLEY: Thank you, Murray. Conferees, Representatives of the States of Nevada and California and interested public citizens, I am delighted to have the opportunity to come back to one of my favorite spots on the face of the earth--Lake Tahoe.

James M. Quigley

I am pleased to be back here in connection with one of my favorite causes; that is, to see that the Federal Government makes appropriate, proper and full contribution in making certain that the waters of this magnificent lake remain available to us and to our posterity.

By way of background, supplementing the statement that Mr. Stein made, I think I might give you a little additional information.

On May 10 of this year the Administrative responsibility of the Federal Water Pollution Control Program was transferred from the Department of Health, Education, and Welfare to the Department of Interior. This was in accordance with a Reorganization Plan submitted to the Congress by President Johnson. The Congress considered the proposal and agreed to it. Effective May 10, the new Administration, which was created by an Act of Congress last October, moved from the Department of Health, Education, and Welfare to the Department of the Interior.

At his initial news conference on May 10--in welcoming our Administration to the Department of the Interior--Secretary Udall indicated that he had that day requested Commissioner Quigley to submit to him his recommendation for a number of areas where water pollution control conferences might be scheduled. In accordance with this directive from my new boss, as my initial recommendations, I submitted to Secretary Udall three places where conferences might be scheduled. Three totally different areas were purposely chosen.

They included 1) a conference on Lake Erie, which was held some three weeks ago, 2) a conference on the Chattahoochee River in the State of Georgia, which was held last Thursday and Friday, and 3) (my third recommendation) the conference that is being held here today dealing with Lake Tahoe.

I think it would be almost impossible to pick three more divergent areas than the three I recommended and which the Secretary accepted in the schedule of conferences. The Problem of the Chattahoochee are those of a river plagued with typical agricultural, industrial and municipal pollution that we find in so many sections of the country - north, south, east and west. The eutrophication problems of Lake Erie are so well known that they have almost become notorious. Lake Erie is the shallowest and the most abused of the Great Lakes of our Nation.

The Great Lakes in turn represent the largest body of fresh water on the face of the earth. For almost two hundred years, Lake Erie has supported and sustained a vast economic expansion in cities such as Detroit, Cleveland, Akron, Buffalo and Gary. The price for this growth is that Lake Erie now stands at the threshold of achieving the dubious distinction of becoming "America's Dead Sea." If this is allowed to happen it is a tragedy. It could happen. In fact, it is very, very late in the game as far as Lake Erie is concerned. You probably couldn't find a lake that is in more complete contrast to Lake Erie than Lake Tahoe.

James M. Quigley

Lake Tahoe is one of the jewels of America. It is one of the great natural resources of the world. It is, by all ordinary standards, an unpolluted lake. This makes it a very unusual body of water, so much so that the challenge we face in Tahoe is entirely different from the one that confronts us in Lake Erie.

We are confronted, for example, in Lake Erie with a tragic example of what can and will happen to a lake from man's horrendous use and abuse of it. In Tahoe, we are faced with the challenge of what man must do to make sure that he can use and enjoy the beauties of the lake without abusing it -- without abusing the lake to the point that it deteriorates and ultimately dies.

The basic purpose of this Conference is: 1) to consider what the problems are in the Tahoe area, 2) to highlight what has been and is being done about them, and 3) most important, to consider what remains to be done. This third point is particularly and especially important in connection with this consideration to review what the Federal Government can properly and appropriately do to make its fair contribution toward the solution of any potential problems of Lake Tahoe.

In connection with any efforts to "save Lake Tahoe," let me, as a layman, put the imponderables in what I think is necessary and proper perspective. Lakes are a little like people in that they, too, have a life cycle. Like people, when they are young they have a tendency to be bright, shiny and beautiful. Like people, they grow old. At middle age they get a little paunchy, start balding or get a little gray and are somewhat less attractive than they were when they were young, slim, and trim.

James M. Quigley

Like people, lakes ultimately get gray and old and eventually die. Now, this is the fate of all people who inhabit this earth and I suppose this is the ultimate fate of all lakes that are located on this earth, including even Lake Tahoe. So, I don't think we should deceive ourselves that anybody is coming here today with the magic formula or to wave a wand whereby the crystalline quality of Lake Tahoe can be guaranteed and assured forever. This is not possible. This is not nature's way. We are faced with the realization that unless we act wisely and do everyting economically and technically feasible, there is a great danger that Lake Tahoe is not going to grow old very gracefully.

If it were possible to put a ban on this Basin this morning and keep everybody out for the next 10,000 years, it's more than likely that when people came back, despite the total absence of people, they would be disappointed to see that the quality of the water had nevertheless deteriorated. So, I think the challenge we are faced with today is not to prevent the aging process or eutrophication of Lake Tahoe. It's going to get old even as we do. The challenge we are faced with is to permit it to grow old naturally and gracefully.

If Lake Tahoe becomes an old lake in 250 years because of what we might do in our lifetime, rather than 25 years, then frankly, in my judgment, I think we will have met our responsibility. We will have made good our trust. Then I am willing to stand on whatever judgment future generations may pass.

On the other hand, if we fail to act and because of that, the lake is lost in a relatively short period of a generation or two, then, frankly, I think we will be judged rather harshly by future generations. They will judge us and we should be judged.

So, we are here today not to point the finger at anyone, but to consider and try to resolve the problems by highlighting what has been done; what is being done. We hope by the conclusion of the conference to agree on further steps that can and should be taken through the cooperation of the states, the local units of government, and the private segment of the economy here in the Tahoe Basin and also the appropriate and proper contribution to this total effort by the Federal Government. This is why we are here. This is the purpose of the conference. We hope we will have a most useful and productive exchange of views and, I trust, a most successful conference by the time we conclude tomorrow.

I appreciate the opportunity to be here, and I hope that during the course of the day and tomorrow I will be able to make an appropriate contribution toward the advancement of our mutual effort.

Mr. Chairman, with that I would like to conclude that I think we are ready to proceed in the regular order.

CHAIRMAN STEIN: As I look out through those lights, I am not sure who I can see. I suppose our host Governor is not here yet. I understand he will be here shortly. Governor Brown, if it is agreeable to you, we would very much like to hear from you at this time.

Edmund G. Brown

Ladies and gentlemen of the Conference, the Governor of the State of California.

STATEMENT OF THE HONORABLE EDMUND G. BROWN, GOVERNOR OF THE STATE OF CALIFORNIA

GOVERNOR BROWN: Mr. Quigley, Chairman Stein, Conferees, my friends from both California and Nevada, I want all of you to know that I appreciate this opportunity to appear at this very, very important conference.

Governor Sawyer will be here at 2:00 o'clock, I understand, and in view of the fact that he is not here at the present moment, why, I will take the priority that he probably should have had. He and I met here three years ago at this very Hotel and were in conference with a great many that I see in this room and laid out the foundation for many of the achievements that our States have made toward the goal of protecting Lake Tahoe from pollution.

I am pleasedthat Secretary of the Department of the Interior Stewart Udall is represented today by James Quigley, Commissioner of the newly created Federal Water Pollution Control Administration. His presence emphasizes the importance the Federal Government attaches to Lake Tahoe as a national asset.

I see a great number of individuals today who are vitally interested in the future of Lake Tahoe, either in their official capacity or as private citizens.

I shall be presumptuous, here on Nevada soil, and welcome each of you to Lake Tahoe on behalf of the people of California.

Many of us have attended a number of other meetings here on potential pollution, including recent congressional hearings. Each of these has been a milestone on the road toward solving in advance pollution problems which could dim the beauty of this magnificent lake.

I was very taken, Mr. Quigley, by your comparison of life and death and youth and old age in comparing it to people and comparing lakes to humans. I thought it was rather a beautiful analogy.

But we have an opportunity today, for the first time, to show a third and interested party, what California and Nevada have achieved so far. We hope you will find in our bi-state effort approaches which may be applied to other pollution problems which cross local, county and even state boundaries.

We have only one question before us today---a question we must answer in appraising the future of this priceless state--and national--asset.

Regardless of what has been accomplished to date--and the list of progress is long--what other steps must we take?

Because Lake Tahoe is a national asset, we should also explore how the Federal Government can help us make certain the Tahoe of the year 2000 is what we want it to be---still beautiful, still pure.

There is no doubt that a threat to the lake exists. It doesn't take an expert to look at the shoreline and hillside developments to be aware that Lake Tahoe is no longer a primitive area.

Let me say, also, that there is more at stake here than Lake Tahoe.

Protecting the beauty and preserving the purity of air and water in California are among government's most important missions in this century.

Here at Tahoe, every element that makes the conservation struggle both necessary and difficult is present. The entire conservation fight is represented on this single proving ground. We have the inevitable conflict between private interest and public interest. We have the tangle of conflicting government jurisdictions. By solving the problem here at Tahoe, we are showing the way for conservation everywhere, not only in California, but also in the rest of the Nation.

I think a brief review of the course we have followed to date will be helpful to you.

First, we by-passed traiditional boundaries to view the problem of sewage as a basin-wide concern. In 1963, on the basis of a review of the probable long-run consequences of growth in the basin, Governor Sawyer and I issued a joint seven-point action program.

The progress to date on each point of the 1963 plan has been gratifying. We called for and are procceding on exportation of treated sewage from the Lake Tahoe Basin. The planning and construction projects undertaken by local utility districts have been heroic.

Programs of water quality research and surveillance and waste treatment technology have been stepped up.

By July 7--only two weeks ago--California Legislature had enacted seven new laws to help fund the sewage export program. We now have made available through combined Federal, state and local funds an aggregate of $9.7 million to build new facilities and to export sewage out of the basin.

The State of California made $3.8 million available to public utility districts to finance facilities. Senator Stephen P. Teale, who is with us today, was the author of several of the local appropriation bills (---some of them co-authored by Assemblyman Eugene Chappie). The Federal Government made a $3 million grant to match State and local funds to start an early construction program.

I would like to make it clear that we are not exporting the problem of the Lake Tahoe Basin to any other area of California and Nevada. The long-term solution, which we are developing is based upon the requirements, and I might add the consent, of jurisdictions surrounding the Lake Tahoe Basin.

Following my request last fall, the Lahontan Regional Water Quality Control Board established comprehensive water quality standards for the waters of Lake Tahoe. You have their recent report. As you gentlemen are aware, these standards were established pursuant to the Federal Water Quality Control Act. They are the first **interstate** water quality standards to be extablished in the Nation. And they are without question the highest standards ever established by government for a body of water in the United States.

We have just completed a California legislative session marked by historic achievements in conservation, particularly in regard to the preservation of Lake Tahoe.

--We enacted legislation requiring mandatory connection of industrial waste and sewage discharges with treatment facilities; and requiring transportation of effluent out of the Tahoe Basin.

--We provided authoriziation for bonds to finance truck sewer lines, pumping stations and other facilities to export sewage out of Lake Tahoe Basin.

The story of progress at Tahoe is impressive. It is a story of victory in many major battles. But Lake Tahoe is a priceless asset. And we are less interested in winning battles than in winning the war.

You will hear today and tomorrow of some problems which, over time and with increasing population growth, increase the threat to Tahoe. They include the problems of runoff from our forests and the problems of drainage from the villages and roads skirting Tahoe's shores.

It is not enough to stand here and look only at the lake---hoping some technological wand will enable us to touch the water and guarantee its purity and clarity for the future of mankind.

We have to look beyond the shoreline, the beaches, the sloping meadows, those massive and towering peaks, the forest---and find ways of directing and harnessing civilization and progress so that we preserve not only the Lake but also its environment.

California and Nevada have established a bi-state study commission to develop recommendations for the kind of area-wide agency we need to provide for the orderly development of the Tahoe Basin.

This committee has been working hard and expects to place its recommendations before us by year's end.

I assure you that it is my intention to preceed immediately to place before the 1967 Legislature plans to create the agency we need to carry on the work at Lake Tahoe.

I will not prejudge the committee's report, but I do have strong opinions about the authority any such agency must have to save Lake Tahoe.

What we want is a coordinated pattern of development in the Tahoe Basin. We want harmony in development of public works. We want good regional planning for the balance of public and private lands so that the people of our states and the Nation will be able to share the beauty of Tahoe. We want a Basin transportation plan which will enable people to view the natural beauties of the Basin, but, a plan which will not blemish that beauty.

These are our objectives. And I believe they can be achieved only through agreement on a single agency which will supervise and coordinate all plans and development in the area.

Agreement on such an agency, no matter how limited its functions, will be difficult to achieve. But I am determined that the 1967 session of the California Legislature will authorize this necessary step.

Our presentation today will cover each of the points I have touched on in more appropriate detail. At this point I would simply like to summarize, thus:

(1) We appreciate the opportunity presented by this conference to report the progress which both California and Nevada have made toward perpetuating the majesty of Lake Tahoe and its irreplaceable setting.

(2) We are in full accord with the conclusions reached in the Department of the Interior's "Report on Pollution in the Lake Tahoe Basin", specifically--

--that the lake is not contaminated;

--that the lake is not polluted;

--that, indeed, no discernible long-term downward trend in water quality of the lake can be determined from the many years of data now available.

(3) We have been scientifically monitoring human influences on the water quality of the Basin for several years and have recognized that exporting sewage from the Basin is the only fail-safe device known for ensuring complete water quality protection.

(4) We have embarked upon a vigorous and well-conceived program of community waste disposal, treatment and export and have enacted appropriate enabling and financing legislation toward this end.

(5) We recognize the urgent need for Federal financial assistance to the state and local programs now under way in the Basin and look forward to a continued expression of national concern in this regard.

(6) We have attacked the development problems of the Lake Tahoe Basin on a comprehensive basis, utilizing the full range of talents and authorities represented by the concerned legislatures and determined communities of both states. The recommendations of our bi-state Joint Study Committee will constitute a major cornerstone of my legislative proposals to the next general session of the Legislature.

In closing, I would like to thank Secretary Udall for the national interest reflected in his calling this conference. California recognizes that trust represented by its jurisdiction over this lake, which we share with our sister State of Nevada. We are grateful that our plans and actions have been worthy of that trust. Thank you very much.

CHAIRMAN STEIN: Thank you, Governor.

MR. QUIGLEY: We appreciate this very excellent, forthright statement. I think you have laid out very nicely the groundwork we are going to be covering several times over in greater detail today and tomorrow. I don't know whether the conferees have any questions for you. But I would suggest, since your fellow Governor (Governor of of our Host State) has arrived, that it would be most appropriate to invite him forward at this time and that we hear from Governor Sawyer.

Governor, if you would please come forward, we shall be happy to hear from you, I am delighted to see you again. (Applause)

GOVERNOR SAWYER: Thank you very much. Let me start by welcoming Governor Brown, Mr. Quigley, Mrs. Brown, Chairman Stein, by the way, and all the other distinguished gentlemen from California and elsewhere to Nevada.

STATEMENT OF THE HONORABLE GRANT SAWYER,
GOVERNOR OF THE STATE OF NEVADA

The preservation of the majestic beauty of Lake Tahoe remains a major concern of the people of Nevada.

The tremendous population growth of our State in the 1960's has created critical problems in a number of major areas, but we have allowed none of these problems to take priority over the need for careful planning in the Lake Tahoe Basin.

Since 1946, when Nevada and California conducted their first joint meetings on Lake Tahoe, Nevada has actively pursued a program aimed at preservation of this resource in its original condition of clarity and purity -- a condition so unpolluted, in fact, that only three other water bodies in the world can compare.

I would like to emphasize the words "purity" and "unpolluted." These are correctly used, because there is no discharge of sewage to Lake Tahoe anywhere on the Nevada side of the lake.

I emphasize this because the Federal Water Pollution Control Administration has conducted pollution hearings in other areas. This agency should know there is no pollution here. The agency report released here, entitled "Report on Pollution in the Lake Tahoe Basin," acknowledges this fact. I quote from line six of page thirty-one of this report, which says: "At the present time, the waters of Lake Tahoe are not enriched, nor do they support dense algal populations."

Since this is a pollution conference, I am not absolutely certain just why we are here. As far as Nevada is concerned, we have, for the past twenty years, engaged in an all-out effort to protect and preserve this precious natural resource. We have supported our words with action.

There is no pollution; there is no enrichment. This last is the statement of your own observers.

Nevada is willing to accept any assistance, support or financing that you, as representatives of the principal land owner in the Basin, may care to extend. The concern of the Federal Government is understandable, since it owns about forty-eight percent of the land area.

At the same time, however, we in Nevada feel we have met our responsibilities with respect to the question of pollution, and it would be unreasonable to expect us to accept dictation on the matter. Further, we feel that conferences should be replaced by meaningful action, and we invite you to add your resources and dollars to the commendable efforts of the taxpayers and residents of this Basin to solve the potential problems resulting from growth and use.

On the Nevada side, financing has been by the users. Their efforts in developing, supporting and financing the existing and planned facilities are exceptional, particularly in view of the phenomenal population growth which has characterized this area in recent years. Voters at Round Hill recently voted unanimously in favor of a three-point-five million dollar bond issue to share the costs of a single treatment plant and sewage export lines with Douglas County Sewer Improvement District number one. And the voters of the Douglas District approved three million dollars in bonds as their share of the project.

Efforts of this type are commendable, but it is too much to expect the resident population of Lake Tahoe to carry the full burden of financing the facilities necessary to protect the purity of the lake.

This is a natural resource of Nevada and California, true enough, but it is also a resource of the Nation.

In 1965, five-point-six million visitors from all over the world were guests of permanent residents at Lake Tahoe. This figure will increase in the years ahead, and, under the present system, the burden on local taxpayers will increase correspondingly.

If the preservation of Lake Tahoe as a magnificent natural resource is to be guaranteed, the help of the principal land owner -- meaning the Federal Government -- must be added to that of our two States and the taxpayers of the Tahoe Basin.

In November of 1963, Nevada and California announced plans for a joint study aimed at preserving water clarity at Lake Tahoe. Until this time, the rest of the Nation had proposed simple sewage treatment, primary and secondary, as the means to assure water clarity. Our States were pioneers, because they recognized nutrients as the problem. By now the rest of the United States is aware of eutrophication, but the pioneering was here.

A study made possible by funds contributed by the Max C. Fleischmann Foundation of Nevada resulted in the excellent "Comprehensive Study on Protection of Water Resources of the Lake Tahoe Basin." Clearly, the report observed, sewage and wastes had to be taken from the Basin or water clarity would be sacrificed and stenches from decaying algal growths would result.

Nevada and California recognized this danger and concluded that export of sewage was the only logical answer at the present time.

Unfortunately, obstacles developed and the time set for the start of this export process was not met in the South Basin. To some extent, obstacles and opposition are still present. But financing is available, plans are approved, and, hopefully, export from the South Basin may now move ahead in the near future.

Until export is accomplished, Nevada is holding the line on building permits. In fact, there have been no new permits issued since the 1963 meeting of Nevada and California, and many of the permits outstanding at that time have since been cancelled. These cancellations have theoretically resulted in a "savings" of some six hundred thousand gallons of sewage daily. The remaining permits, if acted upon by builders, would result in no more than eight hundred thousand gallons daily. This hold-the-line policy has proven successful and will continue until export of sewage is under way.

Now, with respect to the plans for export, Nevada has taken steps to insure that the export will not prove harmful or offer problems to the areas to which it is directed.

Treatment requirements from the South Basin will result in a quality effluent. This will be stored and released to Daggett Creek and thence to the Carson River in a portion of that river which is already receiving irrigation return flows from farm lands.

We do not anticipate any problems in carrying out this plan.

Until very recently, when a new sewage treatment plant was constructed, the sewage from the communities of Minden and Gardnerville was discharged into this same river after treatment and created no difficulties. The export from the South Basin will create only a little more biological oxygen demand on the Carson river than was needed to absorb the wastes of Minden and Gardnerville. However, should problems arise, immediate corrective action will be taken.

In the North Basin, the export program is planned but is only partially financed. Nevada has an interest in the North Basin interception and treatment plant proposed at Martis Valley, and planning has included the objectives of this State.

But this proposal will require millions of dollars to become a reality and cannot be financed by local taxes. Again, I would like to emphasize that Lake Tahoe is a national resource, and Federal participation in preserving its beauty is clearly indicated.

Nevada has a particularly important stake in the North Basin plan because the Truckee River -- the source of water for the communities of Reno and Sparks -- is very much involved. The rapidly-growing communities of the Upper Truckee drain to this river, and safeguards must be provided to insure the purity of this important supply of drinking water for two of Nevada's largest cities. Thus, the endorsement of the North Basin Facility by Nevada will be predicated upon assurance that the waters of the Truckee will not be damaged.

The Truckee is a clean river -- cleaner, in fact, than at any other time in this Century.

In former years this river was heavily contaminated by up-stream uses which included logging, stables, hog farms, septic tanks and a sulphite waste discharge. For twenty-five years, beginning in the last part of the Nineteeth Century, a fight was waged to clean this stream. It was finally resolved when California and Nevada acted jointly to remove the pollutants -- and this action was taken fifty years before a national conscience resulted in the 1965 Water Quality Act.

The observations contained in the "Report on Pollution in the Lake Tahoe Basin" have been carefully noted by me and members of my staff. The report is thoroughly prepared, but it contains some generalities that are subject to interpretation. Further, at least one observation on Nevada is incorrect. Table one lists Incline Village as having a population of eleven thousand, one hundred and producing one million gallons daily of sewage. In point of fact, the maximum population of Incline is about three thousand and the sewage is less than one hundred thousand gallons. Thus, the figures on Incline's nitrogen and phosphorus contributions are also incorrect.

On the subject of Incline, I would like to comment briefly on a related problem of this Basin -- tree disease and infestation. Sewage, of course, is almost synonymous with any discussion of problems at Lake Tahoe, but there are other problems as well. The original Incline environment was characterized by dense tree growth. Thousands of these trees were infested and diseased and had to be removed in order to preserve the others.

There was some opposition to this program, but the action was absolutely necessary. At present, a Basin-wide study of the entire problem of tree infestation and disease is being conducted by Nevada and California in cooperation with the U.S. Forest Service.

I shall not take the time to make a complete summary of Nevada's accomplishments in helping to preserve the purity of Lake Tahoe, but I would like to stress that we are conforming to objectives outlined in the Nevada-California Conference of 1963. New subdivisions are placing dry sewer collection lines so they can be connected to the export facility when it is ready. Septic Tanks are being abandoned, and when and where other service is available, connection is required. Garbage from Incline is being hauled out of the Basin.

By Legislative direction, representatives of Nevada and California meet monthly to hear witnesses from every area of interest at Lake Tahoe. This joint study committee will report to the 1967 Legislatures with a proposal for regulation of Basin-wide activities. Hopefully, this effort will result in a coordination of planning to further develop and protect the beauty and purity of the lake.

We welcome suggestions from the Federal level on how we might better achieve our goals. And, speaking for Nevada, I earnestly solicit the economic support of the Federal Government in helping us to do so. For Nevada, California and the Government of the United States all have an equal stake in the future of Lake Tahoe.

Thank you very much.

MR. QUIGLEY: Thank you, Governor, for your equally excellent, forthright statement. I think you and Governor Brown jointly have laid the ground work we have to cover in the next 24 to 48 hours. We are not going to do everything. Maybe we will end up not doing much of anything. But I think there is total agreement that there is a unique, natural asset of nationwide interest in Lake Tahoe. This is going to demand the best in all of us to effectively meet the challenge.

Do the members of the conference have any comments or questions for Governor Sawyer or Governor Brown? We appreciate the fact that these gentlemen have extremely tight schedules. So I think if there are any questions or comments for either Governor Sawyer or Governor Brown that the Conferees deem appropriate, this would be the time to make them.

(No response.)

That's very interesting. I suspect that this will be the only time the Conferees will not have any comments or questions.

Governor Sawyer, thank you very much. Governor Brown, thank you very much.

GOVERNOR BROWN: Thank you very much and thanks to all of you.

(Whereupon Governor Brown and Governor Sawyer left the conference.)

MR. QUIGLEY: At this particular point in time, I think we will return to something that faintly resembles regular order. You will see why it is not quite that.

CHAIRMAN STEIN: At this point we will call on Mr. Schreeder for the Federal presentation.

I would like to say here that Commissioner Quigley and I have been around most of the country dealing with water pollution control problems. I think the statements of the Governors and their participation have indicated that the Governors of California and Nevada are indeed very sophisticated in water matters. I think this is all for the good, because this puts our program ahead that much farther.

Mr. Schreeder, would you continue with the Federal presentation?

MR. SCHREEDER: The Federal Water Pollution Control Administration has prepared a report which you heard mentioned several times.

Unfortunately, the air transportation situation, being what it is, the people who were to present this Federal report were unable to be here. We made every attempt to get this distributed to the conference to anybody that might have an interest in it. If you don't have a copy, there are several hundred available. I would like to now call on Mr. Irving Terzich, the Regional Enforcement Representative to give a summary of this Federal report. Mr. Terzich?

STATEMENT OF IRVING TERZICH, SANITARY ENGINEER, SOUTHWEST
REGIONAL OFFICE, FEDERAL WATER POLLUTION CONTROL
ADMINISTRATION, DEPARTMENT OF THE INTERIOR,
SAN FRANCISCO, CALIFORNIA

MR. TERZICH: Thank you, Mr. Schreeder. Commissioner Quigley, Chairman Stein: The June 1963 report, "Comprehensive Study on Protection of Water Resources of Lake Tahoe Basin Through Controlled Waste Disposal" * prepared for the Lake Tahoe area Council by Board of Consultants, P. H. McGauhey, Rolf Eliassen, Gerard Rohlich, Harvey F. Ludwig, and Erman A. Pearson, has been used as a source of the basic and projected data referred to in this report.

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* Referred to hereafter as the "Consultants' Report"

Irving Terzich

Information concerning recent legislation, action by state and local authorities, and the status of sewage treatment practices of local public utility districts was provided by Irving M. Terzich, Sanitary Engineer Southwest Regional Office, Federal Water Pollution Control Administration, Department of the Interior, San Francisco, California.

The valuable assistance provided by representatives of the California Department of Public Health, The California State and Lahontan Regional Water Pollution Control Boards, the Nevada Department of Public Health, the Nevada Department of Conservation and Natural Resources, County health departments and local public utility districts, and the Lake Tahoe Area Council is gratefully acknowledged.

Lake Tahoe, astride the California-Nevada state line in the Sierra Nevada Mountains, is one of the clearest, deepest freshwater lakes in the World. Situated at an elevation of 6,225 feet, Lake Tahoe is 192 square miles in area, 122,880 acres, and has a length of 21.6 miles and a width of 12 miles. The lake's maximum depth is 1,645 feet, its mean depth is 990 feet, and its volume is approximately 122 million acre feet. The 1200 foot depth contour is often less than a mile from the nearest shore, and never more than three miles. The Tahoe drainage basin is 506 square miles.

As the growth of resident and tourist populations alike increases at an accelerated rate, the problems associated with sewage and other waste disposal are magnified and the rare clarity and beauty of Lake Tahoe waters are threatened by algal nuisances that may arise from the nitrogen and phosphorus contained in these wastes.

Irving Terzich

Likewise, silt from land clearing practices and real estate development is an increasing problem.

Lake Tahoe, the sparkling jewel-like heart of this vacation wonderland, is the irreplaceable scenic attraction for campers, tourists and vistors alike, who flock to this mountain retreat in ever-increasing numbers.

The shimmering crystal clear water soothes and relaxes those who come to view Lake Tahoe's magnificent splendor. It invigorates and rejuvenates those who boat, ski, fish and swim. It is a source of public water supply and, as the focus for recreational tourism, helps support the economy and welfare of those residing in both the California and Nevada sections of the Basin.

In 1962, 32 agencies, serving more than 16,000 persons, used Lake Tahoe as a source of domestic water supply. More than 8,000 persons receive water from systems that distribute lake water without treatment.

Approximately 48 percent of the land area in the Tahoe Basin is owned by the United States Forest Service and by State and County parks. The California-Nevada Interstate Park Commission is studying the feasibility of purchasing additional land along the east basin wall. These lands, with facilities for picknicking and camping, are used extensively by tourists who visit the lake for boating, fishing, and water skiing.

It is imperative that this unique national resource be preserved and protected for full enjoyment by present and future generations.

Irving Terzich

SOURCES OF WASTES

The nitrogen and phosphorus nutrients contained in sewage and other waste discharges within the Tahoe Basin threaten the splendor of Lake Tahoe.

When present above threshold levels in lake water, these elements can stimulate excessive algal and aquatic weed growths that may produce unsightly surface scums and suspended turbidity that can reduce drastically the clarity and beauty of lake waters.

Sewage-associated nutrient loads are increasing in proportion to the rapid population growth in the Basin. The number of people residing in the Lake Tahoe Basin varies throughout the seasons of the year according to the influx of tourists who visit the area to enjoy summer vacations, winter skiing and year-round gaming in this recreational area. Maximum population densities occur in August.

Summer peak and annual average population estimates for 1962, 1966 and 2010 are estimated as follows: In 1966, the estimated summer peak population will be 180,000 but in the year 2010 this will jump a 330 percent increase to a figure of 596,000 people.

On an average annual population, the increase is even more astounding. In 1966, the estimated total annual average population at 58,000 is to increase in the year 2010 to 254,000.

All sewage collected by community sewers is treated in plants which remove approximately 80 percent of the phosphorus but only 35 percent of the nitrogen. Sewage from residences not served by community sewers is discharged to septic tanks which remove little, if any, phosphorus or nitrogen.

Effluents from the treatment plants are disposed of by spray irrigation or percolation, and those from septic tanks by subsurface seepage. The consultants conclude that, after equilibrium is reached, most of the nitrogen discharged to disposal areas within the Basin, including those serving individual residences, will be transported into the lake by surface drainage and subsurface seepage.

To indicate the relative magnitude of population effect on nitrogen and phosphorus contributions, a break-down is helpful. Now, the estimated connected or unconnected populations for the peak summer season of 1966 are as follow: Approximately 114,700 people will be served by unsewered areas. These make up 64 percent of the peak summer population in the Lake Tahoe Basin.

This sewage goes to privies, septic tanks and a related soil absorption systems.

A population of 20,800 will be served by the community systems of Incline Village, North Tahoe Public Utility District, Tahoe Public Utility District. These communities have public sewers, secondary treatment plus spray irrigation or soil absorption.

A total of 44,500 people will be served by the South Tahoe Public Utility District including the Round Hill and Douglas County Utility District in the state of Nevada. This will constitute 25 percent of the summertime population of 1966.

Here again there are public sewers, tertiary treatment, especially at the South Tahoe Public Utility District, plus spray irrigation and soil absorption.

Since these treatment facilities provide adequate protection against damage to water quality of the lake by other sewage constituents, such as oxygen-demanding organic matter and sewage bacteria, the discussion of pollutants in waste sources is limited to phosphorus, nitrogen and silt.

Approximately two-thirds of the estimated 1966 summertime population are not served by the existing municipal sewerage systems. Sewage from this major segment of the population is disposed of in privies or septic tanks which permit seepage of nitrogen and phosphorus into the subsoil formation that drain towards the lake.

Approximately one-third of the population is served by the following six public utility and improvement districts that provide community facilities for sewage collection, treatment and disposal:

In California these are the South Tahoe Public Utility District, the North Tahoe Public Utility District, and the Tahoe City Public Utility District.

In Nevada, they are the Incline Village Sewage Treatment System, the Douglas County Sewer Improvement District, and the Round Hill General Improvement District.

We anticipate, as Governors Brown and Sawyer have already indicated, that the presentation by the States of California and Nevada as Conferees and also by other related governmental districts, will present rather detailed review of these facilities and therefore although they are contained in brief in the report, they are not being presented at this particular time.

CHAIRMAN STEIN: Do you want this complete report to appear in the record?

MR. TERZICH: I will so make a statement at the end of my presentation.

CHAIRMAN STEIN: Why don't we do it now? For the purpose of the record the report, without objection, will appear in its entirety in the record as if read.

MR. TERZICH: Thank you very much Mr. Stein.

Refuse and garbage also contain significant amounts of nitrogen and phosphorus, about 10 percent of the nitrogen and 25 percent of the phosphorus, which can be transported to the lake by drainage and seepage unless exported out of the Basin.

During the rainy season, silt eroded from soils ripped up during land clearing and development is flushed into the lake and reduces the clarity of waters in the near-shore areas.

Present Status of the Problem

Despite present accomplishments areas reponsible for approximately two-thirds of the sewage-associated nitrogen discharges are not served by community sewers or treatment facilities; sewage flows exceed the capacity of the South Tahoe Public Utility District's treatment plant, and sewage plant effluents are still disposed of within the Basin. Nutrients from these sources in Nevada and California continue to threaten the beauty and full enjoyment of Lake Tahoe and endanger the welfare of both California and Nevada residents of the Basin.

Untreated Sewage: The major source of sewage-associated nitrogen and phosphorus originates in areas not served by the community sewers and treatment systems.

Irving Terzich

The unsewered areas include the residences provided with septic tanks and the camp sites which are furnished with chemical pit privies. Approximately 62 percent of all nitrogen and 84 percent of all phosphorus in sewage discharges originates from these unsewered areas. The urgent need for basin-wide community sewerage systems, for effective nutrient removal, is accentuated by this disproportionately large nutrient load from the unsewered areas.

TREATED SEWAGE

May I preface my remarks in this section to note the comment that was made by Governor Sawyer of Nevada. We will be checking the reliability of the figures on Incline Village and make the corrections that are indicated.

Effluent from the South Tahoe Public Utility District sewage treatment plant, which also serves the Round Hill and Douglas County Improvement Districts, is the second largest source of sewage-associated nitrogen. The effluent from this plant contains 29 percent of the nitrogen, but only 1 percent of the phosphorus.

Treated sewage from Incline Village contains 5.4 percent of the nitrogen and 8.2 percent of the phosphorus, while that from the North Tahoe Public Utility District plant contains 4.4 percent of the nitrogen and 7 percent of the phosphorus.

Effluent from the Tahoe City sewage treatment plant drains into the Truckee River Basin and therefore does not contribute nitrogen or phosphorus to the Tahoe Basin.

Irving Terzich

I would like to mention here that the report in its entirety also gives a breakdown on the estimated nitrogen and phosphorus loads in the Tahoe Basin for the year 2010 and would be available and for your perusal in the complete report.

Effects of Wastes on Water Quality and Use

Eutrophication refers to the enrichment of waters by nutrients through man-created or natural means. Natural enrichment produces a rate of lake aging that may be measured only by the clock of geologic time. Additional fertilization accelerates this rate, making changes in water quality that are noticeable within a few decades or even less. It is obvious, for example, that growing cities and expanding industries are pouring nutrients into the Nation's waterways at an accelerating rate, and that aquatic weed and algal nuisances have increased in areas where they did not exist before, and have magnified in areas where there was only a tolerable growth.

The scope of accelerated eutrophication, or water enrichment, is broad. The most perceptible characteristics to the layman include change in water color, increase in turbidity, nuisance growths of small suspended plants or algal scums, developing areas of rooted water plant, and odors associated with decaying dead vegetation. More subtle changes can be found by the scientific investigator as indicated by decreased light penetration; decreased dissolved oxygen in deeper waters; increased nitrogen and phosphorus concentrations, especially in the deeper waters; significant changes in the algal population, the kinds and number of bottom-dwelling organisms and fish, and increased rooted aquatic weed beds.

Irving Terzich

Present knowledge indicates that the fertilizing elements contributing most to lake eutrophication are nitrogen and phosphorus. Iron is also important. Vitamins such as B_{12}, many micronutrients, and extracellular products from existing plant populations play a role in the developing aquatic plant growths, but this role is not presently well understood. Sewage and sewage effluents contain generous amounts of those nutrients necessary for abundant algal development.

Many eutrophic lakes throughout the country and the world have been fertile reservoirs for algal development for many years. Notable among these in the United States are Lake Zoar in Connecticut, Lake Sebasticook in Maine, the Madison Lakes in Wisconsin, Lake Erie, the Detroit Lakes in Minnesota, Green Lake and Lake Washington in Washington, and Klamath Lake in Oregon.

As nutrient concentrations increase, the numbers of algal cells usually increase. Nuisance conditions, such as unsightly surface scums and algal-littered beaches, occur. The water may become foul-smelling. Filter-clogging problems may occur at municipal water treatment plants. Filamentous algae, especially Cladophora, grow profusely on nearly any suitable subsurface. These can cause nuisances when they break loose and wash ashore to form windrows of stinking vegetation. Induced acceleration of this normally slow natural process is not in the best interests of man.

At the present time, the waters of Lake Tahoe are not enriched, nor do they support dense algal populations. Threats of future problems are serious, however.

The phosphorus concentration in some near-shore areas is not at a critical level for the stimulation of algal growths, and all of the phosphorus present as shown by analytical tests is available for algal utilization. Available nitrogen concentration is presently low and is believed to be the major nutrient limiting algal development beyond the lake's present capacity. Potentially nuisance-producing blue-green algae and filamentous green algae are now present in some near-shore areas of the lake. Furthermore, the impact of nutrients from inflowing streams on the lake water was demonstrated by increased phosphorus concentrations and in some cases increased algal concentrations. Presently, this impact is limited to the near-shore waters surrounding the mouth of the stream.

SILT

Silt, eroded from lands where the natural vegetative cover has been destroyed during land clearing operations, is transported into Lake Tahoe by runoff during the rainy season.

Clearing and excavation of land for housing and commercial development, timber harvest, sand and gravel mining, highway construction and other land uses that disturb the ground surface can create or intensify soil erosion problems. Newly exposed ground surfaces and disturbed duff contribute increased amounts of dissolved nitrogen and phosphorus to the runoff. Silt, reaching the lake during runoff, increases the turbidity and reduces the clarity of onshore waters and increases bottom deposits that can smother fish food organisms.

Irving Terzich

In summary, the beauty of interstate Lake Tahoe, one of the clearest fresh-water mountain lakes in the world, is threatened by nitrogen and phosphorus pollutants in sewage and silt from land clearing operations within the Tahoe Basin.

When present above threshold levels in the lake, these nitrogen and phosphorus nutrients can stimulate algal growths and aquatic weeds that can produce surface scums and suspended turbidity which will drastically reduce the clarity and beauty of the lake waters and cause visual and olfactory nuisances. The phosphorus content of Lake Tahoe waters already approaches a critical level, and a substantial increase in nitrogen content could induce noxious algal blooms in Lake Tahoe. The nitrogen content in human wastes that may drain into Lake Tahoe poses the most serious threat to preservation and continued full enjoyment of this invaluable national resource.

The clarity of onshore waters is reduced where silt erosion from land clearing operations is transported into the lake by runoff during the rainy season.

The Lake Tahoe Basin is a scenic recreational wonderland for tourists, vacationists, visitors and residents alike. Lake Tahoe is used for public water supply, water-oriented sports such as boating, skiing, and fishing, and provides immeasurable aesthetic enjoyment to all who visit and support the economy of the area.

During the peak of summer recreational activity, population has grown from about 132,000 in 1962 to an estimated 180,000 in 1966.

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It is estimated that all available accessible land will have been developed by 2010, at which time the summer peak population is expected to reach 596,000.

Approximately 3,680 pounds of nitrogen per day and 489 pounds of phosphorus per day are presently contained in the sewage discharged within the Basin during the summertime. The major part of these loads, 62 percent of the nitrogen and 84 percent of the phosphorus, are discharged in the areas that are not served by community sewers. Nitrogen and phosphorus contained in sewage discharges will increase apace with increased population.

Public utility districts have individual community sewers and treatment facilities in the more densely populated areas. Treated sewage containing nitrogen and phosphorus is discharged to spray irrigation and percolation disposal areas within the Basin.

Significant amounts of nitrogen and phosphorus are contained in refuse and garbage produced within the Basin.

The consultants have concluded that after equilibrium has been reached, nitrogen contained in the effluents from municipal sewage treatment plants, residential septic tanks, and in refuse and garbage that is disposed of within the Basin will ultimately be transported into Lake Tahoe by surface drainage and subsurface seepage.

South Tahoe Public Utility District, the second largest source of nitrogen, discharges 29 percent of the sewage-associated nitrogen but only 1 percent of the phosphorus.

Incline Village discharges 5.4 percent of the nitrogen and 8.2 percent of the phosphorus, while the North Tahoe Public Utility District discharges 4.4 percent of the nitrogen and 7.0 percent of the phosphorus. Effluent from the Tahoe City sewage treatment plant drains out of the Tahoe Basin.

At present, in 1966, approximately 1,090,000 pounds per year of nitrogen originate within, or enter the Tahoe Basin with sewage, runoff, rain and refuse. Sewage accounts for almost one-half of this amount, and present sewage and refuse disposal practices eliminate only 12 percent of the total.

The amount of nitrogen contained in sewage will increase 5-fold by the year 2010, at which time it will account for approximately 75 percent of the 3,597,000 pounds per year of nitrogen sources in the Basin.

The 2010 nitrogen load may be reduced 50 percent, to 1,820,000 pounds per year, by conventional secondary treatment, or 92 percent, to 745,000 pounds per year if successful tertiary nitrogen-removing treatment processes are developed by that time. Rain and runoff alone will account for 530,000 pounds per year annually.

Objectionable blue-green algae and filamentous green algae are now present in some near-shore areas of Lake Tahoe. Also, the available phosphorus concentration in some near-shore areas is now at levels believed to be critical for the stimulation of algal growths. There are indications that algal growths may become obnoxious if the waters become further enriched.

Irving Terzich

CONCLUSIONS AND RECOMMENDATIONS

Lake Tahoe, one of the clearest freshwater lakes in the world, is an irreplaceable scenic treasure and national resource. To protect it from destruction by man-made pollution and man-accelerated eutrophication is an urgent task of Federal, State, and local government.

Lake Tahoe is threatened by nitrogen and phosphorus pollutants from sewage discharged within the Basin. These pollutants speed up the rate of eutrophication. The phosphorus content of Lake Tahoe water has already reached a critical level. Objectionable algal growths are already present in near-shore areas where phosphorus concentrations are highest. A substantial increase in nitrogen, common in human wastes, could create obnoxious algae throughout the lake, destroy its clarity and make it distasteful to sight and smell.

Lake Tahoe is threatened with pollution by silt erosion from lands where the natural vegetative cover is destroyed and soil is disturbed by land-clearing operations. Silt, transported into the lake by runoff during the rainy season, reduces the clarity and beauty of the water and can destroy aquatic life and adversely change the composition of those organisms that may be present.

Lake Tahoe, the most important resource of the Basin, is used for public water supply, fishing, and all water sports. It now supports a large tourist economy, which is expected to multiply in value sever times in the next several decades. The future economy of the region, however, is endangered by waste discharges.

Irving Terzich

Pollution of Lake Tahoe degrades a resource which, recreationally and aesthetically, belongs to the entire Nation. To preserve this natural heritage for all peoples, man-associated pollution must be stopped.

To stop the deterioration of Lake Tahoe now, and to restore the quality of its water where it has already been damaged, the following general improvements should be made: (1) Establish additional public utility districts, or expand the boundaries and jurisdiction of existing districts, to include the entire populated drainage area of Lake Tahoe; (2) Extend public sewer service to collect all sewage from the Lake Tahoe drainage area; (3) Provide a minimum of secondary treatment for all wastes collected in the drainage area; (4) Export all sewage and garbage out of the Lake Tahoe Basin; and (5) Minimize the transport of silt into Lake Tahoe by including effective soil conservation and erosion control practices in the clearing, development and use of lands within the Basin.

Mr. Chairman, this concludes my report.

May I mention, sir, that there are copies of the report available for distribution to anyone who may wish them.

(The report referred to entitled "Report on Pollution in the Lake Tahoe Basin, California-Nevada, July 1966" is contained in the appendices of the conference document)

CHAIRMAN STEIN: Are there any comments or questions?

MR. FISHER: Mr. Terzich, this report is essentially a resume of the three-year old report of the consultants, is it not?

MR. TERZICH: Yes, sir, it is. True.

MR. FISHER: Have you or your agency done any extensive investigation in the intervening time prior to the submission of this report?

MR. TERZICH: Only to the extent, sir, that we have been cooperating in the aquatic determination - the determination of aquatic life forms, biological forms in the present surveillance program sponsored by the joint States of Nevada and California.

MR. FISHER: You are participating in that as a cooperator in the monitoring that was under way by the two States?

MR. TERZICH: Yes, sir, we are.

MR. FISHER: But other than that, you have no independent information which you have collected?

MR. TERZICH: No, sir.

MR. FISHER: I notice, from page 14, you are referring to a number of subsequent places, quoting from the report -- "Approximately two-thirds of the estimated 1966 summertime population are not served by the existing municipal sewerage systems."

Can you tell me what portion of that summertime population is served by Federally-owned lands?

MR. TERZICH: No, sir, I am sorry. This wouldn't be available to me at the present time. I am sure the United States Forest Service in the El Dorado, Tahoe, and Toiyabe National Forest can be contacted. This I could ascertain for you and include in the record, sir.

Mr. Douglas Leisz, Supervisor of the El Dorado National Forest, will be making a presentation tomorrow. You might wish to put this question to him, sir. I am sure he could answer it.

MR. FISHER: But you made no independent investigation of that preparatory?

MR. TERZICH: No, sir, other than the fact that I am personally aware of the sewage disposal practices by Federal agencies within the Basin on a population basis. I am sorry that I cannot give that to you right now.

MR. FISHER: Will you obtain for me, if you will, figures on the loadings that come by virtue of use of Federal lands?

MR. TERZICH: I would be very happy to do this, sir.

MR. FISHER: I have a number of other questions. I notice some particular emphasis has been made on timber practices within the Basin. Those occur both on private and Federal-owned lands, is that not correct?

MR. TERZICH: Yes, sir.

MR. FISHER: Can you tell me whether or not the timber practices on Federally-owned land and on privately-owned land are satisfactory in your judgment?

MR. TERZICH: I cannot make a comment, Mr. Fisher, on privately-owned lands. I have had a rather extensive conversation with the United States Forest Service and their arrangement through contractors who would be logging the public lands under the multiple-use concept of the Department of Agriculture and am assured that there are contract provisions regulating this to their satisfaction. I have not made a personal examination of the practices myself.

MR. FISHER: Well, both the State and Federal Government have regulations in this regard but on page 33 you say that "Logging should be conducted according to approved management practices." I am wondering if you have an opinion as to whether or not they are or not conforming to the State and Federal regulations in that regard?

MR. TERZICH: No, sir, I do not have an opinion at this time.

MR. FISHER: Let me ask further then -

CHAIRMAN STEIN: Sir, may I make one comment on this report? This report was written by a technical staff with its headquarters in Cincinnati. These people did make a valiant effort to get here. As a matter of fact, when I left them in Chicago, they were in a rather distraught state without an airplane date. I, for one, would like to have the person responsible for writing the report answer these questions. I think Mr. Terzich is generally familiar with the report, but he did not write it. This is not his report; he is just presenting it.

MR. FISHER: I appreciate that. I am just trying to ascertain whether we know if these things are true, or whether they are allegations that certain rules and regulations affecting Federal and State Government are not being enforced and leaves it sort of dangling.

I notice on page 33 that there is discussion of provision for temporary cut-off walls for shore construction of marina developments, etc.

Do you know whether there have been any discussions with the Corps of Engineers, which has the control of issuing permits for shore changes such as piers, bulkhead lines, etc., -- whether there has been any discussion with them about the reviewing of proposed permits in light of the problems you have enunciated here?

MR. TERZICH: By our Agency, sir?

MR. FISHER: Yes.

MR. TERZICH: Not to my knowledge.

MR. FISHER: I suspect, Mr. Terzich, that there are permits of sometime back in the establishment of bulkhead lines within which development can go on without further Federal permit. What would be your opinion that those bulkhead lines ought to be reviewed in light of this report and that each one ought to stand on its own in the future? Any further development along shoreline, just the shoreline itself, ought to be subject to independent and preliminary review by the Corps of Engineers?

MR. TERZICH: It would be my feeling, sir, in light of the discussions that have occurred in the just recent past and our discussions that we already have had today and in the rest of this conference that it would behoove us to work very closely with the Corps of Engineers. The possibility that we might have to reopen on an individual basis some of the bulkhead lines at Lake Tahoe and the activities that might be going on in this manner if threatened-silt transport into the waters of Lake Tahoe were obvious or evident.

MR. FISHER: Don't you also have the threat of direct nutrient regardless of the silting problem?

MR. TERZICH: Yes, sir.

MR. FISHER: In some of these developments?

MR. TERZICH: Yes, sir.

MR. FISHER: And do you know whether or not the Corps of Engineers has a jurisdiction to look at that question when they issue you the permits for established bulkhead lines?

MR. TERZICH: Not to my knowledge, sir.

MR. FISHER: Have you discussed this matter with them?

MR. TERZICH: No, sir.

MR. FISHER: Is it your general opinion -- I am not wanting a legal opinion but I would like an estimate from you whether or not soil erosion, etc., from land-clearing operations falls within the definition of discharge directly or indirectly into the waters over which you do have jurisdiction; whether or not this Act gives the Federal Government jurisdiction over such matters?

MR. TERZICH: If such discharges, whether they were from soil erosion or any other source, sir, interfered with the beneficial use of the waters, they would come under the province of the Act. Mr. Stein may wish to amplify on this.

CHAIRMAN STEIN: Our feeling is that we do have control over or jurisdiction over any discharge introduced directly or indirectly to a stream or tributary. Erosion may be more difficult to control.

Just for the purpose of clarification -- I don't know if the Corps is going to be here -- but in a similar type problem on the Great Lakes which dealt with the dredging, filling, making, putting stuff behind bulkheads or dikes, while the Corps was primarily interested in navigation they did, in working on their projects with us, give full condideration to the water quality aspects of the project. While I am not attempting to speak for the Corps, I suspect that they would take up our recommendations and the State's recommendations on water quality aspects and give them very serious condideration before they give permits to the activities.

We have not had them issue any permits throughout the country in any of the waters within the last few years where the states have indicated that there was a water quality damage.

MR. FISHER: I was concerned particularly with the already-established bulkhead line; whether there was any way to reopen those questions so that when actual development came along we might deal with it as an issue.

CHAIRMAN STEIN: I think you have raised a very real question. As a matter of fact, just before this conference started I received a telephone call from Chicago where we are having precisely the same questions raised. Now, I think we are in the process of negotiating with the Corps in the Great Lakes area. I think we would welcome the support of the legal interests on that point.

I don't think there is any secret as to what our position is. We should make every effort we can to abate pollution whether it is from new or existing installations.

If this involves old bulkhead lines creating problems, we will of course be ready to suggest reopening negotiations and establishing new practices to control it. Whether the Corps can do this under the present authority remains to be seen.

MR. FISHER: I do want to say the Corps has been very cooperative with the State of California, both here and down in the San Francisco Bay where there is an initiation of a new project. The problem I see is the question of already-established bulkhead lines.

Mr. Terzich, let me ask you one further question. I notice that the abatement proceedings provided for under your Act require initiation of proceedings at least 180 days before the abatement acts can be initiated where degradation is, in fact, occurring. I notice this is a problem with you and with us -- how you catch something before it starts, rather than get at it months after it starts. I am sure that a subdivision or a shopping center or a logging practice on a given lot isn't going to take that six months. Have you any suggestions how we can get at that kind of problem?

MR. TERZICH: Mr. Fisher, I would like to defer that question to Mr. Stein if he would like to comment on it. Possibly you might refresh Mr. Stein's memory as to which section of the Act you are referring.

MR. FISHER: Yes, that is section 10.

CHAIRMAN STEIN: You are dealing with standards, aren't you?

MR. FISHER: It talks about the abatement Act itself.

CHAIRMAN STEIN: After the states establish water quality standards we have to give a 180 days.

But in the enforcement provision of section 10 -- the ones we are proceeding on here -- it's a question of endangering health or welfare and we have been administering this phase of the Act since 1948.

"Endanger" means to put in peril. I think we can anticipate that you don't have to wait until the pollution is discovered if there is reasonable danger it will occur. We can go in and beat the pollution.

Now, I do believe that under your permit system in the states, you can, like any permit system, anticipate the effect of either granting or not granting a permit. I do think we can dovetail with the state procedure and work something out equitably.

I would not use that 180-day law because we have other provisions in the Act which I think are more applicable.

MR. FISHER: Let me ask one further question.

You have had an opportunity, I am sure, to review the water quality standards which the Lahontan Regional Water Control Board has set forth in the Basin and which have been approved affirmatively by the State Water Quality Control Board and which heretofore have been submitted to the Secretary of the Interior as a first such action, I understand, in the Nation. Do you find anything in those water quality standards set by the State of California with which you disagree?

MR. TERZICH: Mr. Fisher, although our Regional office has not yet made the official review and recommendations to the Secretary's office, in a brief review and also in personally attending the meeting here a couple of weeks ago, I do not believe that we will find any large disagreement with anything. As you know -- and I am sure that probably Mr. Leggett or Mr. McCurrin will make a presentation later -- the standards which you have set and which are indicated will be here on the bulletin board and are considerably more restrictive than the United States Public Health Service drinking standards.

CHAIRMAN STEIN: Any further questions from California or Nevada?

MR. WHITE: Mr. Fisher asked if you might give him a determination of the percentage of unconnected or unsewered or sewered facilities that were on Federal land. While you are on this, you might look to the planning of these Federal agencies. Nevada and California have in the Task Force been conducting meetings of two days a month, and the growth -. here in the Forest Service areas for parks far exceeds anything that you have now and is really significant and almost dwarfs some of our efforts when we talk with people coming into the Basin.

When you are determining this, will you get this prediction first?

MR. TERZICH: Yes, sir, I will be happy to do that.

MR. WHITE: I wish you would also look at that table 1 and on page 18 with regard to Incline. This is the one where you have about three to eight or twelve times the loadings we think are there.

MR. TERZICH: Yes, sir, this will be checked immediately for its technical accuracy.

MR. WHITE: Yes, on page 21, just so you are -- I am not aware, under 4, of any proposed legislation for Incline, because as far as we are concerned we have existing legislation and we are, in fact, cooperating with California in joining them with facilities now. In fact, the only thing you might be thinking of here is our own deliberations in the study committee where we will recongnize this.

This is what you are referring to and this goes to a broad area of cooperation and rather unusual laws.

MR. TERZICH: I believe this was mentioned, in fact, Mr. White, to indicate the possibility of Incline Village joining physically for the transport down the Truckee River Canyon down through the new plants anticipated down at Martis Valley.

MR. WHITE: While you are looking at this particular one, you should be aware that the study committee has a much, much broader objective than is mentioned herein. It goes to all phases and by now, after seven months of twice a month real serious reviewing, we think we know something about this and some of the plans and they go far beyond the simple one of sewage disposal.

Of course, this same one I am talking about, Incline, is also on page 25 and on page 36. I think you start discussing the shoreline installations, the nitrogen enrichment. I would like to question very much whether there has ever been any determination or relationship of growth related to nitrogen or phosphate on the lake.

Now, for two years I have participated with you and your own Federal associates. We visited all over this lake. We were not satisfied that there is such a relationship.

This is so multifarious that it is really risky to point to any single thing. As an example, El Dorado Beach -- I am not certain whether it was 1946 or 1947, we had a dry year. The lake was down. There was no population here. This sewer plant wasn't in operation. There was the heaviest algal growth that has ever existed.

In fact, you had to cut it to go through here with boats and there is a California document by the Department of Agriculture -- at least this man was an extension agent studying this phenomenon. So, with only two years of surveillance -- in picking out two years of isolated figures -- it is risky to begin making any predictions. In fact, the only place we found any concentration of algae was where there was concentration of water and in our boat harbors.

MR. TERZICH: Mr. White, if I might go back on page 30. In the second paragraph, "Present knowledge indicates that the fertilizing elements contributing most to lake eutrophication are nitrogen and phosphorus. Iron is also important. Vitamins such as $^{B}12$, many micronutrients, and extracellular products from existing plant populations play a role in the developing aquatic plant growths, but this role is not presently well understood."

I think this points up just what you said.

MR. WHITE: Please underline "it is not presently well understood."

MR. QUIGLEY: In answer to or in commenting on Mr. Fisher's original question about the problem of sewage disposal from national forest land used for camping and tourism, I understand that you were generally familiar with it?

MR. TERZICH: Yes, sir, I am.

MR. QUIGLEY: Briefly, could you, for my information, tell us what it is?

MR. TERZICH: Yes, sir, I would be very happy to do this. As I mentioned previously, Mr. Douglas Leisz, who is the Forest Supervisor for the El Dorado National Forest, Department of Agriculture, will make a presentation tomorrow.

Unfortunately, he was unable to be here today. He will discuss in some detail Forest Service proposals to join with the South Tahoe Public Utility District for the complete correction of sewage wastes in the Pope-Baldwin recreational area, which is the largest single Government-owned recreational area in the Tahoe Basin in Forest Service and there are three national forests in the Tahoe Basin; the Toiyabe, in Nevada, the Tahoe and the El Dorado in the State of California. They have multiple camping, picnicking facilities. Wastes in these areas go generally through water flush systems to septic tanks to subsurface soil absorption systems and since they are in the Basin will ultimately contribute nitrogen and phosphorus to the waters of Lake Tahoe.

The other facilities are generally what we call bulk type. The waste may be dumped out of these and are generally taken out of the Basin. There are some areas serviced in the Desolation Valley primitive area which can only be reached on foot or by horseback or by muleback in which there are pit privies. It is literally impossible to provide any other type facility in this area.

The Federal Aviation Agency leases ground and facilities from the El Dorado County at the Tahoe Airport. For the tower, they do have a flush system, a septic tank, soil absorption system there. They are awaiting the extension of the South Tahoe Public Utility District through their area to connect to it at the north end of the lake in the vicinity of Tahoe City.

United States Coast Guard has a lifeguard station, protection station, that is manned on a seasonal basis by eight personnel, an off-seasonal basis of one personnel.

They have a flush system, septic tank. By the way, Placer County, I believe, has a boat-launching ramp and a flush facility there that goes into the same system. The Federal Government has allowed this connection. The effluent from the septic tank is pumped back away from the lake a considerable distance. However, upon physical examination of the facility some two weeks ago we found a break in the force main and there is a work order in process now for correction of this difficulty.

As soon as the North Tahoe groups get together on the new collection system up there, the Coast Guard anticipates collecting and contributing to this system.

I believe, sir, this is a resume of all the Federal installations in the Basin.

CHAIRMAN STEIN: You can see, Mr. Commissioner, this is a technical staff that just has general information on the question. Imagine what happens when they are specific.

MR. TERZICH: Mr. Commissioner, where I was unable to answer the question that Mr. Fisher put to me on the population basis, I do have these figures, but I don't have them available right now.

CHAIRMAN STEIN: Mr. White, do you have any questions? I believe Mr. Fisher has one more.

MR. FISHER: This is a question on which I don't have any technical knowledge, Mr. Terzich. I am just really looking for information. I notice you have recommended that there be secondary sewage treatment of all sewage within the Basin and export of the effluent. What happens to the sludge which is thereby being separated out?

Do we have a problem with it at all? Do you have a recommendation? I may be wrong.

MR. TERZICH: Certainly, sir, we would have exactly the same problem here that we would have generally with solid waste disposal, in that the digested sludge would be received and processed by the sewage treatment facilities within the Basin which would necessarily have to be taken from the Basin.

CHAIRMAN STEIN: Mr. Terzich, before you leave, I have one point that I think probably deserves clarification. This is the question that Mr. White raised on algal growth. I thought your portion of the report was much more definite than any causal relation that Mr. White might seem to indicate. I looked for it in the report. I found it on page 31. You say, "Threats of future problems for dense algal populations are very serious." And then you say, "The phosphorus concentration in some near-shore areas is now at a critical level for the stimulation of algal growths and all of the phosphorus present as shown by analytical tests is available for algal utilization." Then you say, "Potentially nuisance-producing blue-green algae and filamentous green algae are now present in some near-shore areas of the lake." The next sentence says, "Furthermore, the impact of nutrients from inflowing streams on the lake water was demonstrated by increased phosphorus concentrations and, in some cases, increased algal concentrations."

Now, as I read this, I read that the organisms, the algae, are there just waiting to be stimulated.

You do have a relationship between increased phosphorus and the growth of algae and you have made a judgment that the algae concentrations are at the critical phase. Do we stand with these statements in the report?

MR. TERZICH: Well, yes, sir. Unfortunately, Dr. Mackenthun, as you know, who is our specialist on aquatic biology in this area, as you noted before is stranded in Chicago. I think that he would be a little more adept at elucidating on this factor. We would have to stand on what the report says at the present time, sir.

CHAIRMAN STEIN: Mr. White?

MR. WHITE: Murray, you can make statements of this kind. Really, my objection to them and we have known since 1963, as an example, that the phosphorus content in this lake was about at that level, that when other factors were also present produced algae. Nitrogen is not here and I question very much the association. What I am objecting to is the association of nitrogen and phosphorus and algal growth. I have been about this lake time after time in the presence of many of these people. As far as I know, there is not an association of this kind. There is an association with shallow water. There is an association with confined water. But beyond this you can make any story of it you wish. I am objecting to placing these two and pin-pointing them as to what is happening at Lake Tahoe.

CHAIRMAN STEIN: Thank you. Mr. Fisher?

MR. FISHER: I think I have one more question.

CHAIRMAN STEIN: I think this is a critical point that needs clarification. I think we should frame the issue rather carefully.

MR. FISHER: Assuming, Mr. Terzich, but not admitting, at least in behalf of Wally White, that there may be a causal connection between the levels of phosphorus and nitrogen and algal growth, you state that the phosphorus present is already at a high level. Do you know whether the monitoring of that over the past years has shown any substantial increase or has it remained relatively at the same level?

MR. TERZICH: Sir, I do not have the results of the surveillance program at hand. I would have to review that to make a positive statement. I am sorry I am not prepared to answer that.

MR. FISHER: Well, I suppose the question, the next question may be answered the same but for the record, I ought to ask it. Do you know whether or not there has been any appreciable increase in the monitored nitrogen concentration over the past several years in the lake generally?

MR. TERZICH: No, I would have to hold off on that, too. At the presenttime, a surveillance group has under preparation the first annual compilation of data on the lake which must be completed for review in the next week or so and then will be published by the joint States of California and Nevada. We do have this quarterly report in hand but I have not evaluated it as yet.

MR. FISHER: I have no further questions.

CHAIRMAN STEIN: Mr. Terzich, in view of the presentation and the time, we do know that our biologist would be the most informed witness here from the Federal point of view. I would suggest if he should happen to arrive, we reserve the privilege of directing your questions directly to Mr. Mackenthun who prepared this report. Presumably our biological staff have rather firm convictions on this point.

As we see the schedule now, I think we can continue with the Federal presentation and perhaps complete it well before twelve o'clock. Then we will recess for lunch. Shall we come back in an hour and a quarter, or do we need an hour and a half?

MR. WHITE: I would say let's get back at 1:15.

CHAIRMAN STEIN: Tomorrow morning Nevada will make its presentation. Hopefully, that will be finished in the morning. The Conferees will have an executive session after which we hope to have an announcement. I want to assure you that everyone will be heard and heard fully for anything he wishes to say of a pertinent nature. May we proceed with the Federal presentation?

MR. WHITE: What time tomorrow morning?

CHAIRMAN STEIN: Nine o'clock. In order to finish on time we are setting this earlier than we usually do in other places. We usually set them at 9:30. My experience throughout the country has been you can have excellent resolutions and set a meeting for earlier than 9:00, but the attendance in the morning, particularly in a place of such charm and varied interest as Lake Tahoe, indicates that you may have made a mistake. We will reconvene at 9:00 o'clock in the morning. Mr. Schreeder will continue with the Federal presentation.

MR. SCHREEDER: I would like to know whether the Corps of Engineers representatives is present.

(No response.)

The Bureau of Reclamation, Region 2 of Sacramento, is represented by Mr. Glen Laurgaard. Mr. Laurgaard says he has a short statement that he would like to make to the Conferees. Mr. Laurgaard?

STATEMENT OF GLENN O. LAURGAARD,
REGION II, BUREAU OF RECLAMATION,
DEPARTMENT OF INTERIOR,
SACRAMENTO, CALIFORNIA

MR. LAURGAARD: Mr. Chairman, Conferees, participants, I am Glen Laurgaard with the Bureau of Reclamation, Sacramento Regional Headquarters.

The Bureau of Reclamation has had a close interest and involvement in Lake Tahoe since authorization of the Newlands Project in 1903. Lake Tahoe Dam, constructed by the Bureau of Reclamation as part of the Newlands Project, was completed in 1913. Under various court decrees and agreements, water supply operation of the Lake is confined to the upper six feet, involving a total active storage capacity of 732,000 acre-feet.

The operation of Lake Tahoe must be closely coordinated with the other water development facilities constructed by the Bureau of Reclamation in the Truckee and Carson River Basins. Among these are the Truckee Canal and Lahontan Reservoir of the Newlands Project; Boca Reservoir, constructed on the Little Truckee River as a part of the Truckee Storage Project; and Prosser Creek Reservoir, completed in 1962 as the first unit of the Washoe Project.

Still to be constructed as a part of the Washoe Project are Stampede Reservoir on Little Truckee River and Watasheamu Reservoir on the East Fork Carson River. In addition to flood control, fish and wildlife and recreation benefits, these reservoirs will provide limited water supplies for use both in California and Nevada.

Glenn O. Laurgaard

The shortage of water in the Truckee and Carson River Basins, together with the possible export of sewage effluent from the Lake Tahoe Basin, led the counties of El Dorado and Placer, in 1961 and 1962 respectively, to request the Bureau of Reclamation to look into possible ways of increasing the water supplies for the Tahoe Basin.

In June 1964, we completed a reconnaisance appraisal of ways to develop a supplemental water supply for Lake Tahoe Basin. This Lake Tahoe Basin report pointed out various possibilities for increasing the water supply for the Basin, particularly by imports from the American River Watershed. In the report, five alternative plans for imports were considered. These were: (1) the Echo Lake Plan, the discontinuance of diversions from Echo Lake, in the Tahoe Basin, to the American River; (2) the Soda Springs Tunnel Plan, diverting from the North Fork American River; (3) the Twin Lakes Tunnel Plan, diverting from Caples Creek and Silver Fork American River; (4) the Sierra Tunnel Plan, diverting from Silver Fork American River and Caples Creek; and (5) the Rubicon -Meeks Tunnel Plan, diverting from the Rubicon River.

In our report, we recommeded that feasibility investigations be initiated soon, since the time required for planning, obtaining authorization, and constructing project works often involves extended periods of time. To this end, we have requested funds, beginning in Fiscal Year 1968, to initiate such studies.

Another possibility for increasing the water supplies available to Tahoe Basin would be by exchange with the Stampede or Watasheamu Reservoirs of the Washoe Project, since water supplies from each of these reservoirs will be utilized in both California and Nevada. Such exchanges would involve the use of Watasheamu or Stampede water in downstream areas now served from Lake Tahoe so that the Lake water could be used in the Tahoe Basin. Close operational coordination would be required to accommodate such exchanges.

* The Bureau of Reclamation has no direct responsibilities relating to pollution problems of Lake Tahoe. However, should the need arise for developing additional water supplies to replace sewage effluent exported from the Tahoe Basin, the Bureau of Reclamation can render assistance in such developments, and, if called upon, is willing to assist in any other way possible to maintain the unique beauty of Lake Tahoe.

CHAIRMAN STEIN: Thank you, Mr. Laurgaard. Mr. Fisher?

MR. FISHER: I would like to comment concerning your statement that the Department of Reclamation has no direct responsibilities related to water pollution at Lake Tahoe. My understanding of the Senate Document 97, is that one of the requirements thereof is that water quality control be a part of the planning and operation of any water project and that has as much beneficial use as anything else the Bureau of Reclamation or any other project. Is that not so?

MR. LAURGAARD: What was the year the bill you referred to?

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* Expansion of the Bureau of Reclamation remarks are contained in the Appendices.

MR. FISHER: Senate Document 97 which was adopted by President Kennedy as a planning document required that it be followed by all Federal agencies and printed as a Senate document in 1962, as I recall.

MR. LAURGAARD: Of course, what we are doing here principally, Mr. Fisher, are existing projects and the Washoe project now under construction authorized during the 1950's. Our planning, of course, today would take into account all of the most recent legislation on the books.

MR. FISHER: So, that the planning for any export from the Basin would require as a principal responsibility to the Bureau of Reclamation that water quality control be an essential part of any planned project, would it not? I think that is a Federal law.

MR. LAURGAARD: I believe you will find that our planning work is consistent with all these regulations. We have planned, of course, as I pointed out, with these exchanges with Stampede and Watasheamu, these are predicated on the possibilities of working toward maintaining good water quality through these exchanging arrangements.

MR. FISHER: I am saying the operation of your present projects and operation for any future projects include a direct responsibility relating to water quality control, do they not?

MR. LAURGAARD: I am not aware of these fine points, Mr. Fisher.

MR. FISHER: Let me ask one further question. Has the Bureau of Reclamation declined to agree to the proposed Interstate Compact which has been in the process of negotiation between the two States?

MR. LAURGAARD: The Bureau of Reclamation comments are incorporated in the Department of Interior comments which I believe went forward some months ago.

MR. FISHER: Well, I am wanting the question to be part of the record here. Well, if you can't answer it personally, I will ask one of our own witnesses on that.

MR. QUIGLEY: Are you in a position to summarize what the comments were? Are you generally familiar with them?

MR. LAURGAARD: I am generally familiar with them. They cover a wide number of agencies, not only with the Bureau of Reclamation involved, but the Fish and Wild Life Service, Bureau of Indian Affairs. There may have been others by the U.S.G.S. and other members of the Department of the Interior. Within the Washoe Project there are the task force functions which the Department has been trying to carry out which involve directly Fish and Wild Life, Bureau of Indian Affairs and Reclamation. The Purpose of the Washoe Project is to try to accommodate all the interests of these agencies in moving forward with a water resource development plan, within the limitations of the water supply available for the Stampede and Watasheamu Reservoirs.

MR. QUIGLEY: Well, if Mr. Fisher's question were restated as to the Department of Interior views, would you be in a position to answer it?

MR. TERZICH: No, I would not.

MR. QUIGLEY: Is this because you would not be familiar with what the final report says?

MR. TERZICH: I am familiar with the comments in general that went forward by the Department of Interior to the Compact Commission and there were a wide variety of exceptions taken to the proposed Compact. How serious those would be to the Compact I am not in any position to say.

MR. QUIGLEY: Mr. Chairman, I would think for the purpose of the record of this conference that it would be imperative that we would have the benefit of the Department of the Interior view, pro or con. Perhaps we can call on a witness to come up with the answer. Frankly, I don't know. I think it would be appropriate that Mr. Fisher's very valid question be brought to the attention of the Conferees.

CHAIRMAN STEIN: I don't want to put anyone on the spot. May we call on Mr. William Davoren, the Regional Coordinator for the Pacific Southwest Region, the Department of Interior. He may be in a better position to give us the Interior view. Mr. Davoren, could you help us?

MR. DAVOREN. Having watched and admired Mr. Fisher for several years, I hesitate to get up here. However, Mr. Laurgaard answered the question as best we can answer it now. He is absolutely correct. The Bureau of Reclamation comments on the Compact are part of the Department of the Interior comments. This, in turn, is more or less the Government position on the Compact. I am sure Hugo was well aware of those comments and that's the way it is.

MR. QUIGLEY: Simply, for the record of this Conference and the purpose of convenience, would it be possible for you as the Department representative in this area to furnish to the Conferees a copy of the Department views?

MR. DAVOREN: On the Compact? Certainly.

CHAIRMAN STEIN: Put that in the record. If there is no objection at this point so that they will be set out.

MR. DAVOREN: These are already in the hands of the official body in the Nevada-California Compact Commission.

CHAIRMAN STEIN: For anyone reading this record concerning this discussion about the Compact, we should keep a self-contained document. We should have the comments recorded here, because once the Compact position is enacted you will be able to find that in the library. You won't find the Department comments in the library and it should be available in the transcript. We will include it at this point.

MR. DAVOREN: We will be glad to send them to all Conferees.

CHAIRMAN STEIN: That is the order.

* (The comments referred to are contained in the Appendices of the Conference Document.)

MR. FISHER: I would like to make a comment on this, Mr. Chairman. The thing that my question goes to is that very often water development agencies, Federal, State and local, have really put additional water supply or irrigation municipal uses on a much higher plane in the past than the maintenance of water quality. If it turns out to be uneconomical, for instance, to line canals in order to make an additional amount of water available for water quality control, the water user doesn't want to pay that extra cost, or can't. You put in a lesser facility which does in fact waste the water which might have been available for water quality control itself.

I can tell you the State of California in its planning in all of its water projects and in its comments in the future on Federal projects is going to make very clear that the maintenance of water quality comes before additional uses are made of water which is available for the uses in place. This is really the question I am raising here.

I recognize it is a serious economic question for users on both sides of the State line. It is a serious question of the Federal agencies and the local agencies that have proceeded on the other line, but this is the attitude of the State of California. I want to make sure that all Federal planning in this Basin agrees with what I think ought to be the rule of law at this point.

CHAIRMAN STEIN: Mr. Fisher, I would like to state that I am not familiar with these comments of the Department of Interior. I think the record is abundantly clear where the Federal Water Pollution Control Administration has stood in the past on this, particularly if you look at our activities in the Colorado River Basin and the South Platte River Basin. We have steadfastly taken the same position that you have -- that we have to have water in the stream for water quality. One of the problems we have is that once we put it in the stream, we are not sure if we can get it by the next farmer and keep it there for water quality. It gets pumped out. This is one of the fundamental issues I think we are going to have in the western states. I think this deals with rivers more acutely than it might deal with the Lake Tahoe Basin.

But I do think Mr. Fisher has raised this question, very pertinently. I would like to associate myself with his views. I don't know how I could do otherwise, the record being as it is in the other states. As you know, it can raise a lot of controversy. Thank you, Mr. Fisher.

MR. QUIGLEY: Mr. Chairman, I would like to comment on this particular point further. I think it is brought into very sharp focus with the transfer of the Federal Water Pollution Control Administration to the Department of the Interior.

This baby is a tough and challenging and a difficult problem, which literally now sits on Secretary of Interior Udall's desk. I think in making whatever decision he is going to have to make, whether it is on Lake Tahoe or anywhere else, it is absolutely imperative that he has available all of the facts. The Conferees' recommendations are going to be submitted to the Secretary at the conclusion of this conference.

That is why I think it would be terribly important, absolutely essential, that in making the review and making judgment on the Conferees' recommendations that he would have available whatever other background material there is that involves other agencies and other programs in his Department.

CHAIRMAN STEIN: Are there any further comments or questions?

(No response.)

Thank you.

Mr. Schreeder?

MR. SCHREEDER: I don't think there are any other Federal entities that wish to appear at this time.

As has been stated a couple of times already this morning, the Forest Service has a short presentation tomorrow. We will be glad to entertain any Federal people that wish to talk to the Conferees at a later date.

MR. QUIGLEY: Mr. Chairman, if there are no other Federal presentations at the moment, I have two questions on my mind. One -- and I raise the question realizing there is nobody here who can specifically answer it-- I am particularly anxious that the Conferees be assured that a representative of the Forest Service will be available to make a presentation tomorrow.

All right. The record will not show the nods of the heads. But the reporter should note that. The Conferees are going to be mighty surprised if the spokesman for the Forest Service is not here in the morning.

The second point I would make -- and I don't want people to scrap their presentations that are already prepared -- is on the comment Mr. White made in connection with one of the colloquys earlier today. This involved the question of boats and marina and boat pollution.

In the course of this Conference, I would hope that someone representing either the State of Nevada, California, or someone else, will be prepared to make available to the Conferees information concerning the current and potential pollution problem from boats. I raise this question simply because as we go around the country, it is clear that pollution from boats is one of the growing pollution menaces that we face on almost all bodies of water.

It would be tragic to make the necessary outlay of money and put the areas, districts, States and the Federal Government to the great trouble of making the kind of effort that has to be made on Tahoe and then find that we have not adequately and effectively faced up to the boat pollution problem.

I am not prejudging it. I don't know whether it is a big problem or a small one. But I suspect that here, as in every other place in the country it is a growing one. I think the Conferees would be remiss in their deliberation if they did not devote some time to this problem.

CHAIRMAN STEIN: Any comments or questions? If not, we will stand recessed until 1:15.

(Whereupon the Conference recessed for lunch.)

AFTERNOON SESSION JULY 18, 1966

CHAIRMAN STEIN: May we reconvene. We will now call on Mr. Fisher.

STATEMENT OF HUGO FISHER, ADMINISTRATOR, THE RESOURCES AGENCY OF CALIFORNIA, SACRAMENTO, CALIFORNIA

MR. FISHER: Mr. Chairman and Mr. Quigley, Conferees.

I am Hugo Fisher, Administrator of the Resources Agency of California, Sacramento, California, and, as the Governor has already explained, California's official conferee for this meeting. The Agency which I head embraces nearly all those State agencies with policy and enforcement programs in the field of water quality. I refer to the State and regional water quality control boards which have the primary water quality policy and enforcement responsibility in California; the Department of Water Resources which conducts water quality research and surveillance programs in California; and the Department of Fish and Game which also has a program of water pollution research and specific abatement enforcement responsibilities.

Each of these agencies has specific interests and specific programs in the Lake Tahoe Basin.

I will be calling, later in our presentation, upon the gentlemen which you see seated here in front of the room. At this time, I would like simply to introduce them. First is Mr. Frank Stead of the State Department of Public Health; Professor P. H. McGauhey, of the University of California; Dr. Rolf Eliasson of Stanford University; Mr. Reginald Price of the Department of Water Resources; Mr. Francis Longo and Mr. John Leggett of the Lahontan Regional Water Quality Control Board; Mr. Paul Bonderson of the State Water Quality Control Board; Mr. Harlan Moyer of the South Tahoe Public Utilities District; Mr. Hubert Bruns, Chairman of the Board of Supervisors of Alpine County; Mr. Randolph Dewante, representing the North Tahoe utility districts; Mr. Fred Hodder representing the County of Nevada; Mr. Albert Marino, Public Health Officer, of the Placer County Health Department; and Mr. John Thompson of the El Dorado County Health Department. Testimony will also be received from Mr. Richard Graves of the California-Nevada Joint Study Committee. Mr. Al Landis will also be making some remarks.

We are concerned here today with the quality of the water of Lake Tahoe itself. As demonstrated in the Department of Interior "Report on Pollution in the Lake Tahoe Basin," which we received last week, our concern is focused upon two primary factors which pose a possible threat to the quality of the Lake's water. The first of these is sewage and refuse; the second is silt.

Hugo Fisher

We have reviewed the Department of Interior report and are satisfied that it is a reasonably accurate digest of the information developed by local interests, which has been available to us for some time.

We are fortunate today in having with us those responsible for this data and I will be calling upon them to assist us in interpreting the significance of the data.

I believe an important reference point is the statement made on Page 34, Paragraph 2 of Interior report, which I quote:

> "No significant long-term trend in the transparency of the Lake can be detected from observations made during the past 90 years."

At this point, I think all of us sitting as Conferees have to make a close distinction between that algal growth which affects the clarity of the lake itself and that algal growth which may occur from time to time attached to the bottom in near-shore areas. A clear distiction on that is not made in the report for us and one is used interchangeably with the other. This I think can lead us into errors in judgment. I would add to this, and we will hear testimony to the effect that (a) the lake is not contaminated. Mr. Stead, State Department of Public Health, will expand on this point; (b) the lake is not polluted. No significant long-term trend in any water quality factor represented in the lake can be established from the data. Professor McGauhey and Dr. Eliasson will discuss this point in greater detail. I should mention here that California has been collecting water quality data on the lake since 1952. We have, in fact, continued and intensified our efforts to monitor water conditions in the lake.

In April of 1965, the States of California and Nevada instituted a joint water quality investigation, patterned after that proposed in the June 1963 report "Comprehensive Study on Protection of Water Resources of Lake Tahoe Basin Through Controlled Waste Disposal." Mr. Price of the Department of Water Resources is prepared to explain the nature of that program.

It is not my intention in remarking upon the lack of contamination and pollution in the lake to imply that we are not concerned. For quite to the contrary, we are concerned about present and future water quality conditions here. We have been so concerned for a long time.

We have for a long time recognized that this lake represents a unique resource with unique natural qualities and unique cultural development problems. We recognized that protection of this resource would require unique public attitudes, governmental policy actions and physical solutions.

In 1963, Governors Brown and Sawyer announced a plan for progress aimed at reversing those human activities which threatened the clarity and the purity of the lake. The Governors' program recognized the logic and urgency of the recommendations presented in the 1963 report to which I referred earlier. The program called for a study and development of a plan of action for disposal of sewage from the north end of the lake outside the basin.

In this regard -- incidentally, I want to tell my fellow Conferees that the State of California wholeheartedly without reservation joins with the statement made by Governor Sawyer of our intention to proceed with export sewage from the north end of the lake, as well as the south end of the lake.

The program called for plans for the immediate export of sewage from the south end of the lake, and the initiation of research, surveillance and governmental coordination programs. Mr. Longo will explain the evolution of the concern by local interests for protection of the lake and how these concerns became attitudes, and the attitudes policies. In particular, he will discuss the report "Lake Tahoe Water Quality Control Policy" which was developed by local participants of both states under the aegis of the Lahontan Regional Water Quality Control Board.

This policy statement, of which I have submitted copies to you, establishes the water quality control objectives. At this point, I ought to point out in our law -- the Federal law talks about standards -- we are talking about an identical concept and so wherever you read the word "objectives" we happen to be using California law, but they are water quality standards in Federal terms and under Federal law. This policy statement, which establishes the water quality control objectives which we will meet and the means by which we will meet them and assure their continuance, rises from the Governors' 1963 charge.

The policy report was adopted in June of this year by the Lahontan Regional Water Quality Control Board after consideration of testimony received in public hearings. The Lahontan Board's report was then adopted by the State Water Quality Control Board and now represents combined policy of all the state and local interests. Mr. Bonderson of the State Water Quality Control Board will explain further the significance of this statement.

Hugo Fisher

As I indicated earlier, the problems and prospects of protecting the crystal clarity of the lake's water requires unique physical solutions. The concepts of biological enrichment of the lake; the loading of nutrient elements in land areas surrounding the lake, and of the need for export of these nutrients from the lake basin itself were advanced and accepted as early as 1958. Mr. Moyer and Mr. Dewante will report on progress in sewage facility development and the physical objectives which the public utility districts at both the south and north ends of the lake are now working.

The testimony to be presented by these gentlemen should make it abundantly clear that the developments being undertaken by these districts are not in any sense the "least cost alternatives" normally associated with sewage facility development, or, for that matter, any kind of public investment. These are present-day actions aimed at ultimate solutions. The costs are staggering in terms of the present capacity of local interests to finance them. But local financial deficiencies have not swerved these districts from undertaking projects capable of the timely and effective disposal of the full projected sewage load of the region.

Nor, might I add, has the fact that these proposals called for the disposal of sewage effluent outside the counties of its origin deterred the districts' plans. I will call upon Mr. Hubert Bruns, Chairman of the Board of Supervisors of Alpine County, to attest to the fact that Alpine County endorses the south area export plan and stands ready to provide full cooperation toward the achievement of the proposal.

Let me tell you that the problem bringing local entities together, which appear on the surface to be competitive, to come to this conclusion is no mean feat in any except a dictatorial government which ours is not.

I will call upon Mr. Fred Hodde~~r~~ who represents the County of Nevada, for a statement of the fact that the North Tahoe area plan is not only acceptable to, but highly compatible with, facility expansion requirements of the Truckee area.

The Department of the Interior report and the several state and local studies upon which the Interior report is based, have all identified the role of garbage disposal in adding nutrients to the basin's land areas. This problem has been recognized by local health authorities and I will call upon Mr. Albert Marino of the Placer County Health Department to explain the programs these two counties have now launched to remove garbage and refuse generated in the basin to areas outside the basin.

The testimony of these witnesses then should leave little doubt that the nature and magnitude of any threat to the quality of the water of Lake Tahoe has received abundant recognition during the last decade and that this concern has led to the promulgation of positive governmental policy actions and to a well conceived, forward-moving program of physical construction and adjustment and that there is no likelihood that eutrofication of Lake Tahoe is going to result either from a lack of local awareness or a lack of local action.

I would like to move now from the subject of sewage and garbage to discuss the water quality threat to the lake posed by the inflow of silt. The origins and character of silt and silt transport in the basin are varied.

They are, for the most part, direct results of the increasing human activity at the shoreline and in the tributary drainages. There is nothing unique about silt production, per se, in the Lake Tahoe Basin. This is a problem faced every place in the United States. It happens to be more urgent here. The silt-production processes here are the same as those found throughout mountainous regions of California, indeed throughout the western United States. This fact is born out by the Interior report. The report's recommendations for the protection of land and water are characteristic of measures employed with varying fervor and varying success throughout California for many, many years.

The special significance of silt in the Lake Tahoe Basin is simply this: to meet the water clarity objectives we have set for the lake, we will need to apply recognized land and water protection measures with fervor and success never before achieved in the West.

So, where do we start? Obviously, we will concentrate our attack on those readily-apparent problem areas with the tools we already have.

The Interior report recognizes three problem areas which we have already considered: logging, highway construction and maintenance, and building site development.

Fifty percent of the basin is contained in three national forests. These forests are administered under a multiple-use concept which, in this instance, gives special recognition to the region's need for sensitive land and water protection measures. We in California hold in very high regard the forest management practices of the U. S. Forest Service. We are confident that Federally-supervised logging operations will assume a very minor role in future silt-producing processes in the basin.

The term "logging" is not really applicable to the timber harvesting that occurs on private lands in the basin. These activities are normally associated with building site preparation and will be discussed later in that context.

Highway construction and maintenance in the area is hazardous to surface waters in the Lake Tahoe Basin as it is in any precipitous terrain where routing opportunities are limited, slope stability is difficult, spoil sites are scarce, and borrow sites are normally in or near streambeds. The first really productive examination of this problem was that undertaken some years back by the California Division of Highways and the Department of Fish and Game. The discussions led to a formal agreement between these agencies that provided for early planning consultation on alignment and construction proposals. Working together, the aquatic bioligists and design engineers are able to pin-point potential problem areas and specific remedial measures.

Fish and Game's success with the highway interests led eventually to legislation which requires all entities, private and governmental, to submit plans for any activities requiring streambed alteration to the Department's review and recommendations. Our progress with this program has been gratifying.

I might say, incidentally, at this point that the State law with regard to the control of the State Water Quality Control Board, in 1963, and to the Regional Board's 1965 provides for not only local and private interests, but all State agencies must comply with the standards set by the Region and the State Boards for water quality. I think that the progress which has been undertaken as a result of this program has been gratifying.

And, I might add, it has been directly proportional to the ability of trained technicians in two diverse fields -- road building and aquatic biology -- to communicate their concerns and requirements to one another.

As you are aware, the control of building-site development is a matter which for the most part, has been left in the hands of the cities and counties. We have a great deal of respect in California for local government. This respect is particularly warranted here in the Lake Tahoe Basin.

In May 1964, the five California and Nevada Lake Tahoe Basin counties completed a regional development plan. Among the recommendations of the plan are listed specific objectives regarding building site development. The implementation of these plan objectives will require specific local controls aimed at the alleviation of soil and ground-covered disturbance.

I will ask Bill Briner -- is Bill here?

A PARTICIPANT: No, he is not. (Mr. Fisher continuing.)

I was going to ask Bill Briner, Chairman of the Lake Tahoe Regional Planning Commission to brief you on the relevant aspects of the plan and to report on implementation progress to date. I believe his report on recent action by Placer County, where he resides, would have provided valuable insight into the manner in which local jurisdictions are translating general objectives into hard-hitting ordinances.

There has been very legitimate concern over the fact that there are several dozen different district, county, state and Federal agencies represented in the Lake Tahoe Basin. The mere number suggests that not all agencies are moved by the same forces, or in the same direction, or at the same rate.

Both the California and Nevada Legislatures have recognized this concern; and, in 1965, they resolved to do something about it.

The two States, through parallel legislation last year established a joint study committee to examine the capability of local government in the Basin to deal with development problems which are essentially regional in character. This represents an effort by the two States and representatives of local government to determine goals and standards for the future development of the region, and to ensure that our public programs are designed and executed to conform with these goals. I would like to enter into the record the statement of Mr. Richard Graves, Chairman of the Joint Study Committee, which describes the committee's progress to date.

Concluding my remarks on silt, or, more appropriately, land protection, I would leave you with these thoughts. Silt production processes in the Lake Tahoe Basin are basically those found in any developed mountain area in the West. The thing which makes silt noteworthy here is the unusually high water clarity objective we have set for ourselves in Lake Tahoe.

There is a good deal less logging and considerably more building here than elsewhere in the mountains. The State of California has established procedures for minimizing siltation from highway construction and stream alteration activities.

The control of building site development and its effect on surface water quality has been the object of aggressive action by local jurisdictions. And, finally, that the capability for effective governmental achievement of the many social objectives in the Basin is undergoing thorough scrutiny as a result of joint legislation by two deeply concerned Legislatures.

I would like at this time to recognize the very substantial contributions made by the Lake Tahoe Area Council and the League to Save Lake Tahoe in fusing the wide-spread public esteem and concern for the Lake into well-directed aggressive citizen action.

This introduction, then, outlines the discussion which California representatives will provide here today. If there are no questions at this time, I would like to call upon Mr. Frank Stead of the California Department of Public Health to comment upon the nature of Lake Tahoe water from the public health standpoint.

CHAIRMAN STEIN: Let's check to see if there are any comments or questions.

(No response.)

I have one. I realize California and Nevada really originated most of this, including the material in the Federal report. But on page 6 of your statement you said "Nor"..."has the fact that these proposals called for the disposal of sewage effluent outside the counties of its origin deterred the districts plans." You indicated that this was a unique plan started here. That may be so, but for those of us lawyers and others who have spent their whole career on the Chicago diversion case, I don't think this is one that California and Nevada can take the credit for starting.

MR. FISHER: Well, I can tell you, Mr. Stein, and I am by trade a lawyer, that the jurisdictional and water rights questions involved in this discharge at a primary point beyond the county of origin is a very critical one in the State of California and within the West, as you will hear in later testimony both from us and from Nevada.

I don't know of any place which has faced up to this critical legal question that we have, but you may know of one. I don't.

CHAIRMAN STEIN: I hope the states get together on this. We haven't. The Chicago diversion case has been on the original docket of the Supreme Court and has been active since 1923. We are actively litigating the case now and I suspect most of us who have worked on this case ever since we got out of law school expect to retire on it. I hope you do better.

MR. FISHER: All I can say is we have been able to resolve this thing in the course of two years without a lawsuit.

CHAIRMAN STEIN: Mr. Fisher?

MR. FISHER: I would like to call as our first witness, Mr. Stead. Frank Stead?

STATEMENT OF FRANK STEAD, CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

MR. STEAD: Gentlemen, Conferees, there has been filed with you a statement entitled "Public Health Programs at Lake Tahoe", by Dr. Lester Breslow, Director of Public Health. I will not read the statement in its entirety but merely a central portion of it.

CHAIRMAN STEIN: Pardon me, Mr. Stead. Do you want the entire statement to appear in the record as if read?

MR. STEAD: Yes sir.

CHAIRMAN STEIN: Without objection then, that will be done.

(Whereupon the above-mentioned statement follows:)

STATEMENT OF DR. LESTER BRESLOW, M.D., DIRECTOR OF PUBLIC HEALTH, CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH, BERKELEY, CALIFORNIA

MR. STEAD: In the interest of time we will not read it.

Public Health Programs at Lake Tahoe

By

Lester Breslow, M.D.

The protection of the public health is the first and most basic governmental responsibility in controlling water pollution and this is true even at Lake Tahoe where the preservation of the scenic beauty of the area currently occupies the center of attention. Up until 1950, the State and Local Health Departments in California held the line single-handedly to prevent pollution of the surface waters in the Lake Tahoe Basin. With the establishment of the State and Regional Water Pollution Control (now Water Quality Control) Boards in 1950, the responsibilities of health departments were restricted to the classic concern of prevention of communicable disease.

Health department programs related to sewage disposal are of two types - preventive and corrective. Preventive programs consist of advance review and approval or denial of all individual household systems, submitting public health recommendations for incorporation into discharge requirements for community systems and maintenance of continuing surveillance of all waters used by the public for recreation. Corrective programs are achieved by the issuance and enforcement of peremptory orders or the quarantining of contaminated areas, or both. In either instance, the health department is clothed with greater power and is able to take quicker action than any other agency to cope with an emergency. These powers have been used without hesitation at Lake Tahoe when the situation warranted.

All persons who have followed the course of events at Lake Tahoe agree that the public health, in the classic sense, has been adequately and continuously protected. In fact, the waters of the lake, from a bacteriologic standpoint, probably constitute the purest body of impounded water in the State. In support of this statement there is attached hereto a copy of a comprehensive report entitled "Lake Tahoe Basin Water Quality Survey", State of California Department of Public Health, Bureau of Sanitary Engineering - 1961.

Why, then, are the public health departments in California so concerned with the problem of sewage disposal in this Basin? The first and most obvious reason is that we are a part of the technical resources of the State and have an obligation to assist on any program where the State's interest is involved. The most basic reason for our interest in preserving the attractive appearance of the lake's waters, however, is that we consider that outdoor recreation, in all its forms, including especially scenic enjoyment, is absolutely essential to the public health and will become increasingly so with each decade.

With the conquering of the communicable diseases that once decimated our population, our attention is increasingly turning to the balance that is being established between increased environmental and social stresses on the one hand and the tolerance of an aging population on the other. We are beginning to realize that the quality of the environment statewide and the preservation of unique settings, such as Lake Tahoe in particular, are not amenities that can be dispensed with, but are biologic necessities to the maintenance of our people in a state of health.

MR. STEAD: There has also been, I believe, filed with you this report entitled "Lake Tahoe Basin Water Quality Survey - 1961" If that has not reached you, I will give you this copy when I finish testifying.

CHAIRMAN STEIN: Do you want that to appear in the record as if read?

MR. STEAD: Yes, I don't believe you have that.

CHAIRMAN STEIN: Thank you. Without objection it will be done.

(The report referred to is contained in the Appendices to the Conference Document.)

MR. STEAD: The three factors I think of relevance here pertain to the public health consideration of the legal powers of the Department with respect to water supply, recreation and waste disposal and secondly, the present state of quality of the waters in the Basin for these three uses. The larger public water systems in California are regulated by the State Department and the smaller ones by the local health departments. Pursuant to a single statute, these public water supply systems operate by public health permit. These permits follow the classic pattern throughout the United States, which includes study and review of the physical features of the system, careful laboratory examination and an inspection and laboratory-monitoring control program. There are about 38 public water supply systems in the Basin, in addition to a larger number of individual resort systems. Eight of the larger ones exist at the south end of the Basin. Now, there are 18 water supply companies that take water directly from the lake and there are in excess of 20 that take their water supply jointly from wells and streams.

It is interesting to note that about 60 percent of the water supplied is taken directly from the lake and is of such quality that chlorination has not yet been made mandatory. These refer, of course, to the deeper intakes.

The quality of water from all of the intakes in the lake is excellent when compared to the norms of domestic water sources. With respect to the wells and streams, these are of differing quality. Usually any defective quality in the wells is traceable to faulty construction of the well. The stream intakes regularly require chlorination. The monitoring programs carried on show that these public water supply systems not only operate within the United States Public Health Service drinking water standards, but, as I mentioned before, the greater number of the intakes directly from the lake for the large systems achieve this very unusual record without chlorination.

The powers of the Health Departments with respect to recreational use of the lake itself are the classic public health powers that permit the sanction of warning or quarantine when for any reason the bacteriological safety of the water is threatened or in fact impaired. There have been a few instances, but only a few, where these sanctions have been imposed. One of them was Labor Day weekend, I believe, of 1958, where a failure of one of these sewage treatment plants permitted the escape of raw sewage into the lake. At that time, a sizeable portion of the lake was indeed quarantined. But this was a period of short duration.

The powers of the Health Department with respect to waste disposal, as represented in Dr. Breslow's statement, are true. The preventive powers are not specific.

They are the classic general powers of a Health Department to review all new installations and comment thereon to the Planning Commission of the local government if it is a subdivision or to the other appropriate levels of local government if it is an individual case.

Much has been said about the threat which septic tanks posed to the clarity of the lake and there is merit in this concern. But it should be noted that the septic tank means a sewage disposal that for over 50 years has enabled the provision of sewage disposal with complete protection to public health and without any direct discharge to any of the surface waters of the Basin, save for an occasional failure.

Now the powers of the Health Department with respect to abatement are more specific and more direct. As indicated in Dr. Breslow's letter, if there is indeed a demonstrable threat to public health due to sewage, a preempt order, effective immediately, can be imposed upon the discharger. This power has been used infrequently but when necessary without any hesitation. As an example of this, South Tahoe Public Utility District is at present operating under such an emergency preempt order, requiring a very high degree of disinfection of the waters which are applied to land.

With respect to the quality of the water in Lake Tahoe, the question of greatest specific interest is the median coliform index for the large number of sampling stations around the lake. This is set forth on pages 15, 16 and 17 of the report on Lake Tahoe Basin water quality. Instead of trying to strike a general average conclusion from these data, I believe we have successfully attempted - and perhaps for the first time on a level of this sort -- to correlate the coliform levels found with the type of usage of the lake.

The report makes quite clear that in the undeveloped and sparsely-used areas of the lake, the coliform results are indeed different and lower than in the highly-developed areas or at the mouths of the streams themselves.

In general, the data in the report indicate that the waters of the lake, as exemplified by a portion 50 feet out from the shoreline, have a stable average of five coliform organisms per 100/ml. I am sure you recognize this as indicative of extremely high standards.

In thinking of these high standards and comparing them with the standards of safety used for recreational use in the United States, one should also bear in mind that these coliforms represent organisms of non-sewage origin. These are primarily the types of coliform which come from the washings of the land in areas where there is no sewage at all. Consequently, this record of low-density coliform referred to in this report is all the more remarkable, almost without exception in areas where a rise in this number of coliform organisms was noted in highly developed areas. The bottom of some of the swimming areas is stirred up by the bathers and the rise in coliform level is consistent with rises from turbidity, indicating that it is indeed eroded soil itself which is being reflected in these bacteriological results.

Rather than take up further time in a general statement, I would like to conclude my remarks with these few points and leave other questions to later witnesses when you will hear testimony closely relating to these standards on Lake Tahoe.

I would merely point out that when you do listen to the coliform standards proposed for Lake Tahoe, bear in mind that these are not public health standards in the classic sense. These are standards to prevent deterioration of Lake Tahoe and levels that present absolutely no public health concern.

In conclusion, I would state, in re-enforcement of Mr. Fisher's statement, that for domestic use in part of the areas of the lake, even without simple chlorination, and for recreational use throughout Lake Tahoe, is an uncontaminated body of water.

CHAIRMAN STEIN: Thank you, Mr. Stead. Any comments or Questions?

(No response.)

MR. FISHER: Now, Mr. Chairman, I would like to call Professor McGauhey who will speak for himself and Dr. Eliasson.

STATEMENT OF PERCY H. McGAUHEY, PH.D., CHAIRMAN, BOARD OF CONSULTANTS TO LAKE TAHOE AREA COUNCIL

PROFESSOR McGAUHEY: Mr. Chairman, Conferees, and ladies and gentlemen, I am P. H. McGauhey, formerly Director of the Sanitary Engineering Research Laboratory at the University of California and an appearing here as Representative of the Lake Tahoe Area Council in the role of Chairman of the Board of Consultants, which was involved in the preparation of the report that you heard called the "Consultants' Report", 1963 report.

I will speak only briefly to the activities of the Lake Tahoe Area Council in furthering the solution of these problems of eutrophication and possible loss of quality of the water in Lake Tahoe.

I am sure you are aware that this Board consisted of: Professor Rolf Eliasson, who at the time the Board was set up was on the verge of transferring from M.I.T. to Stanford University;

Professor Gerard Rohlich, from the University of Wisconsin, who has had vast experience with the Madison Lakes that were mentioned here previously; Professor Herman A. Pearson from the University of California who is deeply concerned with water quality. This group was assembled by the Lake Tahoe Area Council under funds granted by the Max C. Fleischman Foundation in 1961. The duty of the group primarily, or first duty I should say, was to assist the Foundation in selecting a consulting engineer to prepare a study of the sewage disposal in Lake Tahoe Basin. The Board reviewed a number of something over 25, I believe, proposals from engineers, and at the request of the Foundation submitted three names of groups that seemed most prepared at that moment -- I don't mean most competent to do the job necessarily, but the kind of manpower they were ready to put on the job and that looked most hopeful.

From those the Foundation selected the firm of Engineering Science, Incorporated, and in line with the proposal that had been previously made to them Harvey F. Ludwig, President of the group, then joined the Board of Consultants and has served as a member of the Board throughout the study, which was completed, as you know, in 1963.

The report was prepared by Ludwig and his staff pursuant to the objectives and day-to-day or month-to-month watchfulness of other members of the Board.

I might say that Ludwig has said that this was the first time he ever worked with an outfit that had the authority to tell him to commit suicide. However, that was not the outcome of this study.

So, the first attempt we made was to come up with a report. That had to be done, as you know, within about one year.

Therefore, it was not possible to assemble statistically inviolate data that would stand for all time. It meant that from there on it was still necessary for programs of surveillance and nutrient inventory, in order to continue looking after the lake in the future.

In the report, with which I am sure you are familiar -- I am not going to go into the vast details -- we did study every aspect of the water that time permitted and pretty well persuaded ourselves through the agency of the best consultants we could get that the lake, as you heard this morning, had enough phosphate in it to get into trouble by producing algal growth if there was enough nitrogen to go with it. Our conclusion was that the lake was nitrogen sensitive in contrast to a good many other lakes that have not developed blooms throughout the world which are typically phosphorus sensitive.

Among the proposals that were rendered by this report was export from the Basin with a quality acceptable, of course, to those who are going to receive it -- and you have heard testimony that no one proposes just to discharge sewage on the unsuspecting people outside the county of origin.

The other was to treat it to a level equal to drinking water standards or thereabouts and to export it from the Basin via the Truckee River. One might inquire: Why make it good enough to drink and then discharge it? The point hinges on this matter of nitrogen and phosphorous, which has come up several times today, and, although the levels are not high in the lake, we can say with certainty that just because water is good enough to drink, from the standpoint of phosphates and nitrates, doesn't mean it is suitable for discharge into Lake Tahoe.

Therefore, if we export drinking water to someone else it would be in the interest of protecting the lake and it would preclude discharging on them some sewage that we don't want to keep ourselves.

The third possibility the report presented was the discharge to the lake itself after treatment, and we did not recommend that it should be considered seriously at the moment because the state of knowledge at the present time is not adequate to support any such conclusion.

At the close of this study in 1963, the Board was continued in a technical capacity as consultant to the Lake Tahoe Area Council under a further grant from the Max C. Fleischman Foundation. The duties that we have performed since that time have been largely twofold. First, we gave technical advise on request -- I stress that -- to the agencies that were given responsibility for setting water quality objectives in Tahoe by the two Governors. That is specifically the Health and Welfare Agency of Nevada with Wallace White and the Regional Water Pollution Control Board with Mr. Leggett as it's Executive Officer.

When they ran into problems with which we could assist, they called upon us to do so. The nature of these problems, of course, went all the way from being technical to: what sense do some kind of proposals that reach their hands make? What sense does the proposal make? In this world there are a lot of true believers that suddenly spring up with some kind of routines which say "We know this will work." We never tried it. Lots of these were emerged from obscurity. It was our duty to help return them to obscurity.

The second thing that we did pursuant to that duty was as advisors to the task force as to what we thought of the proposals that have been mentioned here today as the water quality objectives of Lake Tahoe.

Another thing that we have been doing is to consider what other factors other than sewage arise from shoreline and on-shore activities, both of man and nature which might lead to a loss of quality of the lake. To that end, we set out late in 1963 to try to persuade the Federal Government to support a demonstration grant which would do a good many things. This persuasion took two years but finally we got around to the demonstration grant which began in June of this year. Now, this demonstration grant, which gave $74, 000.00 to the Lake Tahoe Area Council to carry out studies which the Board will help guide is for the purpose of finding out to what extent nitrogen and phosphorus, or either one in any of it's forms, is a triggering mechanism which might set off eutrophication of Lake Tahoe waters. We also expect to explore for the national interest, as well as the Tahoe situation, the possibility of growth factors, which were mentioned this morning. Iron was mentioned this morning. Silica might be thrown in, some of the vitamins were mentioned. We want to find out what kind of growth factors may exist besides nitrogen and phosphorus in sewage effluents such as are produced by normal treatment plants and by the tertiary plants that are being developed here at Tahoe with Federal assistance. We want to see whether these growth factors may occur in the leaching from septic tanks, from surface runoff from relatively uninhabited areas and inhabited areas.

It has not been demonstrated that 180,000 people can just dwell around the margins of a lake without restraint, even if there weren't any sewage without accelerating the demise of the lake. So, we want to explore things as well as other kinds of treatment that have not yet been tried here at Lake Tahoe.

Once we have shaken out what the triggering mechanisms for eutrophication of water are, we then propose to demonstrate its applicability to the Lake Tahoe water

Now, as Mr. Fisher has said, we have to have action in controlling the quality of the water in Tahoe. We can't wait for more research. One might inquire "What are you fellows likely to contribute even if you find it out?" The answer to that, I would say, at the present time is that water quality objectives have been established on the basis of the best information. As a matter of fact, in all of the information that the task force could assemble we have no certainty that these objectives may not be too rigid or too lax. Eventually all water quality objectives have to be refined to reality. If out of this study which as been financed by the Public Health Service -- at least, they gave us some money before it was transferred over to the Department of Interior -- if out of that study we could get the kind of information necessary for refining the objectives in the future, we would feel that the money had been well spent.

Now, I mention that I feel that the lake is nitrogen-sensitive. Mr. Stead has called attention to the phosphates in septic tanks. He didn't pursue that far enough to call attention to the fact that phosphates are notable for their movement through soils.

You know one of the big problems in irrigated agriculture is how to get the phosphates down to the root zone of the plants. If the lake is nitrogen-sensitive, then it is of some interest to us what becomes of the nitrogen that is introduced into the ground as a result of the septic tank activities. I should say in closing that this demonstration grant is not something that we expect to set off by ourselves and do in a vacuum. We have the assurance of the cooperation of the mutiple health agencies here of the State Health Department, of the Water Pollution Control Agencies of both States and all of the other public agencies that are involved.

We hope to make use of the material coming from the inventory that Mr. Stead referred to. I believe Mr. Fisher did also. We hope that once we have achieved some idea of what is triggering eutrophication, we could then participate in evaluating that data in terms of the Lake Tahoe area -- after we know how much existed in the area. That has been the principal activity of the Board.

I would restate that we are a technical group. It is not our task to interfere with or anticipate the political decision, nor to assume any of the prerogatives of the agencies -- either local, State or Federal -- which have responsibility for looking after the quality of the Lake Tahoe water.

That concludes my remarks.

CHAIRMAN STEIN: Thank you, Professor McGauhey. Any comments or questions?

MR. WHITE: In the presentation by Professor McGauhey -- I hope you realize that this is a two-State use of this board of consultants in appearance here. It is probably for the purpose of time, but one of the questions that is going to be asked, probably tomorrow, and one of the questions I think that some of our people in Nevada need to have answered, is probably the $64,000.00 question, Professor:

As a representative of the Consulting Board, and this is that group with the longest continuing knowledge of Lake Tahoe, is there any process or any manner or protecting Lake Tahoe without export at the present time based on present knowledge?

PROFESSOR McGAUHEY: I would say, no, for two reasons: the first is that we know from some past experience with lakes in Switzerland and elsewhere (from where we brought consultants) that nitrogen -- if phosphorus is in adequate supply, nitrogen can trigger it. I can't say that it will but it can trigger, and has triggered the blooms of algae.

The other thing is that we do not know beyond per adventure of a doubt that if we took out all of the nitrogen and phosphorus from the sewage that we would not have left growth stimulating factors that could cause organisms to grow on the amount of nitrogen and phosphorus it could assemble from natural runoff.

MR. WHITE: I appreciate very much your answer on this in the straightforward manner you did, Professor. I have one other question: Based on present knowledge, do you know of any practical treatment process whereby these wastes could be treated and returned to the lake?

PROFESSOR McGAUHEY: My answer to that would also have to be no -- a bit qualified -- because we do know how to take phosphorus out or reduce it to a very low level. But when the term "practical" is involved, this, I presume, means economic and in practice somewhere -- I don't know of any in practice anywhere except, of course, the experimental setup at South Tahoe for the removal of phosphorus. But if the matter of nitrogen is a tricky one, and we say it is and I think it is, then I know of no process that is practical from the standpoint of economics or technology. That is in terms of practical that would enable us to strip that out. If these other sources of nitrogen were adequate -- by that I mean from run-off from the surface areas and from fertilization of lawns down to the waters edge, fertilizing golf courses and all kinds of things -- it might get nitrogen into it. Even if they have removed the nitrogen and phosphorous, there may be other growth stimulating factors in the sewage effluent that would set the thing afire.

MR. WHITE: I hope you people appreciate the resource we have here. I hope in the next day or so some of you will remember these answers by that representative of this authority in this Basin that has the real scientific knowledge. Professor, thank you.

CHAIRMAN STEIN: Thank you. Are there any further questions?

(No response.)

Thank you very much. We have been requested by the stenographer for a two or three minute break. I think he probably needs it. All stand up now for about two or three minutes.

(Whereupon a short recess was taken.)

CHAIRMAN STEIN: May we reconvene?

MR. FISHER: Have there been made some findings to distillation processes for stripping nitrates and phosphates out? Is there any known process which is within what you consider engineering and economic feasibility that could be applied here and if it is then what happens to that which you strip out?

PROFESSOR McGAUHEY: Well, on this distillation process it certainly would be possible to distill the sewage effluent. You can distill ammonia. It is a little difficult there. Maybe you have to distill it a couple of times. Nevertheless, it could be distilled for possibly eight times the cost of sewage treatment today. By that I mean maybe $700 or $800 per millions gallons, as opposed to our $100 cost today. These are rough guesses. These are rough figures.

In economical distillation, you seldom strip anything here down to dryness. If you did, the residue could be transported out of the Basin quite as readily as municipal refuge or sewage sludge, as mentioned this morning. I would think that there are better ways to get water out of sewage than by distillation.

MR. FISHER: Thank you.

PROFESSOR McGAUHEY: Does that confuse the issue adequately?

(Laughter.)

CHAIRMAN STEIN: May we continue, Mr. Fisher?

MR. FISHER: Yes, I would like to now call Mr. Price. I have instructed the rest of our witnesses to submit their formal written statements and to summarize in five or six minutes, so that if there are questions on the major point, we can pursue those.

CHAIRMAN STEIN: We won't repeat it each time, but all the statements will appear in the record as if read without objection. You may go ahead there, Mr. Price.

STATEMENT OF REGINALD C. PRICE, DEPUTY DIRECTOR OF POLICY, CALIFORNIA DEPARTMENT OF WATER RESOURCES, SACRAMENTO, CALIFORNIA

MR. PRICE: Mr. Chairman, Commissioner Quigley, and Lake Tahoe Conferees. I am Reginald C. Price, Deputy Director of Policy, Department of Water Resources. The Director, William Warne, regretted very much that he couldn't be with you today but I am pleased to have this opportunity to spell out what we are doing within the Department today in this area. I am going to cut my remarks down since my full statement has been filed for the record.

This conference is another important opportunity to focus public attention on the water problems of Lake Tahoe. It provides an occasion for California and Nevada to report action being taken to prevent this jewel of the Sierra Nevada from losing its luster as a scenic wonder.

This action can be successful only if the available land water resources of this Basin are properly utilized, and nutrient sources, both natural and man made, are controlled to prevent any increase in the eutrophication of the lake.

First let me briefly explain certain of the large display maps and charts which I have brought with me today. The first map, entitled "Lake Tahoe Region", shows Lake Tahoe, the cities of Reno and Sparks, Pyramid Lake and the Federal Newlands Project. This map also shows the location of the proposed Stampede Reservoir, a unit of the authorized Washoe Project.

Water released from Lake Tahoe flows down the Truckee River where it is diverted in part by the cities of Reno and Sparks for municipal purposes and by the Truckee-Carson Irrigation District for irrigation use on the Newlands Project. Water not diverted by these agencies flows into Pyramid Lake. It is apparent that any use of water by any agency in either the Lake Tahoe or the Truckee Basin is interrelated to uses in the other basin.

The second map, entitled, "Lake Tahoe Basin", shows the location of proposed lines to export sewage from Lake Tahoe Basin. This map also shows the South Tahoe, North Tahoe, and Tahoe City public utility districts. Also shown are the proposed annexations to and potential service areas of the public utility districts.

The last display shows graphically projections of the Basin's permanent population and summer population. The black bars display projected summer peaks. It is clear that the population of the Basin is increasing at a rapid rate. It is also apparent that there is a considerable difference between the permanent population and the peak summertime population. This differential has a pronounced and obvious effect on planning and financing -- all government services in the area. The population figures shown here are taken from the Lake Tahoe Regional Planning Commission's 1980 Regional Plan report. Recent unofficial figures indicate that the actual current population is probably higher than that shown on the bar graph.

Provisional California-Nevada Interstate Compact

One of the most important current needs is to develop long-range solutions to all of Lake Tahoe's water problems.

The State of California during the past decade has participated in negotiations with the State of Nevada designed to lead to an interstate compact for division of the interstate waters of the Lake Tahoe, Truckee River, Carson River, and Walker River Basins, and also for control of the quality of these waters. The two States reached agreement on provisional compact on October 29, 1965. The compact has been reviewed and commented upon by all the concerned local and state agencies. While the review by the Federal agencies has not been fully completed, most of the concerned Federal agencies have submitted their comments.

This morning the question came up relative to the Interior comments. I just happen to have in my hip pocket a copy of the comments of the Department of the Interior.

(Laughter)

So, if it will facilitate action, Mr. Chairman, I will --

CHAIRMAN STEIN: We would be delighted to receive them.

MR. PRICE: I would mention also that it would be my understanding that we do not as yet have what is necssarily a Federal position with respect to the Compact. We have received comments from a number of Federal agencies with the exception of those of the Department of Justice, which are pending. It would be my presumption that a Federal position would be stated by the Bureau of the Budget, and, since we do not yet have the comments from the last of the Federal agencies or an integrated expression from the Bureau of the Budget, it would be my understanding, Mr. Chairman, that we do not yet have a necessarily final Federal position with respect to the Compact.

With respect to water supply, the provisional compact allocates water for existing uses. It divides between the States the unused water in each basin in excess of existing uses. It allocates to the Lake Tahoe Basin a total of 34,000 acre-feet of water annually. Of this amount, 23,000 acre-feet is for use in the California portion of the basin and 11,000 acre-feet in the Nevada portion.

With respect to water quality, the provisional compact provides that the water quality of Lake Tahoe shall be maintained at a level to protect the fishery resources and the recreational and domestic water supply uses. To preserve the clarity and purity of these waters, the provisional compact prohibits the discharge of any sewage plant effluents into the lake or its tributaries unless health and water quality agencies of both States agree that no harm can result. The water quality control policy recently adopted by the Lahontan Regional and State water quality control boards contains more specific statements of water quality objectives. These statements are consistent with the general provisions of the provisional compact.

Under the compact, each state would retain the basic obligation of insuring that the quality of the waters of Lake Tahoe is maintained at a high level. The compact provides that when necessary to protect the health of the people and the quality of these waters, the permanent Commission shall permit the export of waste water from the Basin. When approving the export of sewage effluent, the Commission is obligated to impose terms upon the exporter to prevent a reduction in the quantity of water which the downstream users are entitled to receive.

The Commission could deny such export if it found that the exported waters would create a health or other hazard in the disposal area.

The Department is pleased to note your Administration's Report on Pollution in the Lake Tahoe Basin recognizes that the export of waste water from Lake Tahoe is essential at this time. The report states that the provisional compact's provisions relating to preventing a reduction of flow available to the Truckee River water users could delay and perhaps even preclude export of wastes. To meet this problem the California Compact Commission has recently proposed language for inclusion in the compact which would obligate the permanent Commission to require the export of sewage if such export is necessary to maintain the clarity of Lake Tahoe. The Commission continues to be obligated to impose terms to protect rights of downstream water users. California's proposal has not yet been acted upon by the Joint California-Nevada Interstate Compact Commission.

California will bring to the attention of the Joint California-Nevada Interstate Compact Commission your Report on Pollution in the Lake Tahoe Basin in order that your position be given adequate consideration.

That segment of my remarks relates to water quality programs.

WATER QUALITY PROGRAMS

Several important water quality programs are conducted by the California Department of Water Resources in the Lake Tahoe area.

Here I am skipping over, Mr. Chairman, to a brief reference to the water quality investigations initiated in July 1965. Participants include the States of California and Nevada, the counties of El Dorado, Placer in California, and your Administration.

The purpose of this joint investigation is to monitor the overall quality of the lake. --

MR. FISHER: Reggie, I think that the monitoring program is part of the record.

MR. PRICE: I will mention only that it establishes the base line conditions against which future changes may be measured.

I am skipping the rest of the material on water quality in my statement. I pass next to the proposed Stampede Reservior.

Water From Proposed Stampede Reservoir

You are aware that the Bureau of Reclamation plans to begin construction of the Stampede Division of the authorized Washoe Project in the near future. Stampede Dam and Reservoir will be a multiple-purpose project in California on a tributary of the Truckee River. Since the Truckee River is an interstate stream, the project's water conservation benefits will accrue to both California and Nevada.

The construction of new water storage facilities will provide additional water to meet the increasing needs of the expanding populations in both States. California beneficiaries of this water supply will utilize project water by exchange. Throughout the Truckee River and Lake Tahoe Basins, water will be diverted where available and a like amount of water will be released from Stampede Reservior, if required, to satisfy the rights of existing downstream water users.

Governor Edmund G. Brown included as a special call item in the 1966 First Extraordinary Session of the Legislature the subject of authority for the State to contract for water from the Stampede Division. The Legislature enacted and Governor Brown approved Senate Bill 15, which provides this authority.

California will now proceed to contract for its share of the avaibable water, which is estimated to be 4,300 acre-feet annually.

Our studies show that water users in Sierra, Nevada, and Placer Counties can fully utilize this new water by about year 2000.

The provisional compact provides that the export of sewage effluent shall not adversely affect downstream users by reducing the water supply to which they are entitled below that which would be available if all water allocated to the Lake Tahoe Basin was being utilized and no export was occurring. Therefore, it may become necessary to provide a supplemental supply of water to the Basin to offset the effect of export on the water supply available to the downstream users. During the initial years, until such time as Sierra, Nevada, and Placer Counties can fully utilize the yield of Stampede water allocated to California, surplus water may be utilized in the El Dorado and Placer County portions of the basin for beneficial uses, including possible replacement of exported sewage effluent.

The Department will assist in negotiating the necessary arrangements for utilization of Stampede water.

The use of water within the Newlands Project:

I would like to refer to the statement which was presented by the Bureau of Reclamation this morning and I refer to the concluding sentence, which I quote. "However, should the need arise for developing additional water supplies to replace sewage effluent exported from the Tahoe Basin, the Bureau of Reclamation can render assistance in such developments and, if called upon, is willing to assist in any other way possible to maintain the unique beauty of Lake Tahoe."

Now, I come to a matter here which involves the Bureau of Reclamation as well as other groups within the Interior Department.

Reginald Price

Use of Water Within the Newlands Project

The State and the local agencies within California are proceeding to contract for water from the authorized Stampede Division to assure that California's use of water will not adversely affect the ability of downstream users to divert the water to which they are entitled. California's ability to accomplish this objective will depend to a large degree upon the proposed allocation of water from the Lake Tahoe -- Truckee River -- Carson River system to the Truckee-Carson Irrigation District for use on the Federal Newlands Project.

The United States supplies water from this system to the District through the facilities of the Newlands Project. The diversion of water to the Newlands Project under rights of the United States is the largest single use of water from this system. We understand that the Department of the Interior is negotiating with the District for a determination of the allocation of water to the Newlands Project. The District has expressed concern that the export of sewage effluent from the Lake Tahoe Basin will adversely affect its water supply. If the quantity of water allocated to the Newlands Project is unreasonably high, it will impose an unnecessary and undue financial burden upon the Lake Tahoe agencies in their efforts to export sewage effluent without adversely affecting the rights of downstream users of which the Newlands Project is one.

MR. FISHER: Excuse me, just a minute. This is an administrative decision within the Department of the Interior?

MR. PRICE: This is correct. Under initiation by the Department of the Interior and its position relative to this matter would be within the discretion of the Secretary of the Interior, as I understand it.

In order to assure that the needs of the Lake Tahoe Basin are given adequate consideration, we urge if you are not already doing so that the Federal Water Pollution Control Administration take an active part in the negotiations between the Department of the Interior and the Truckee-Carson Irrigation District.

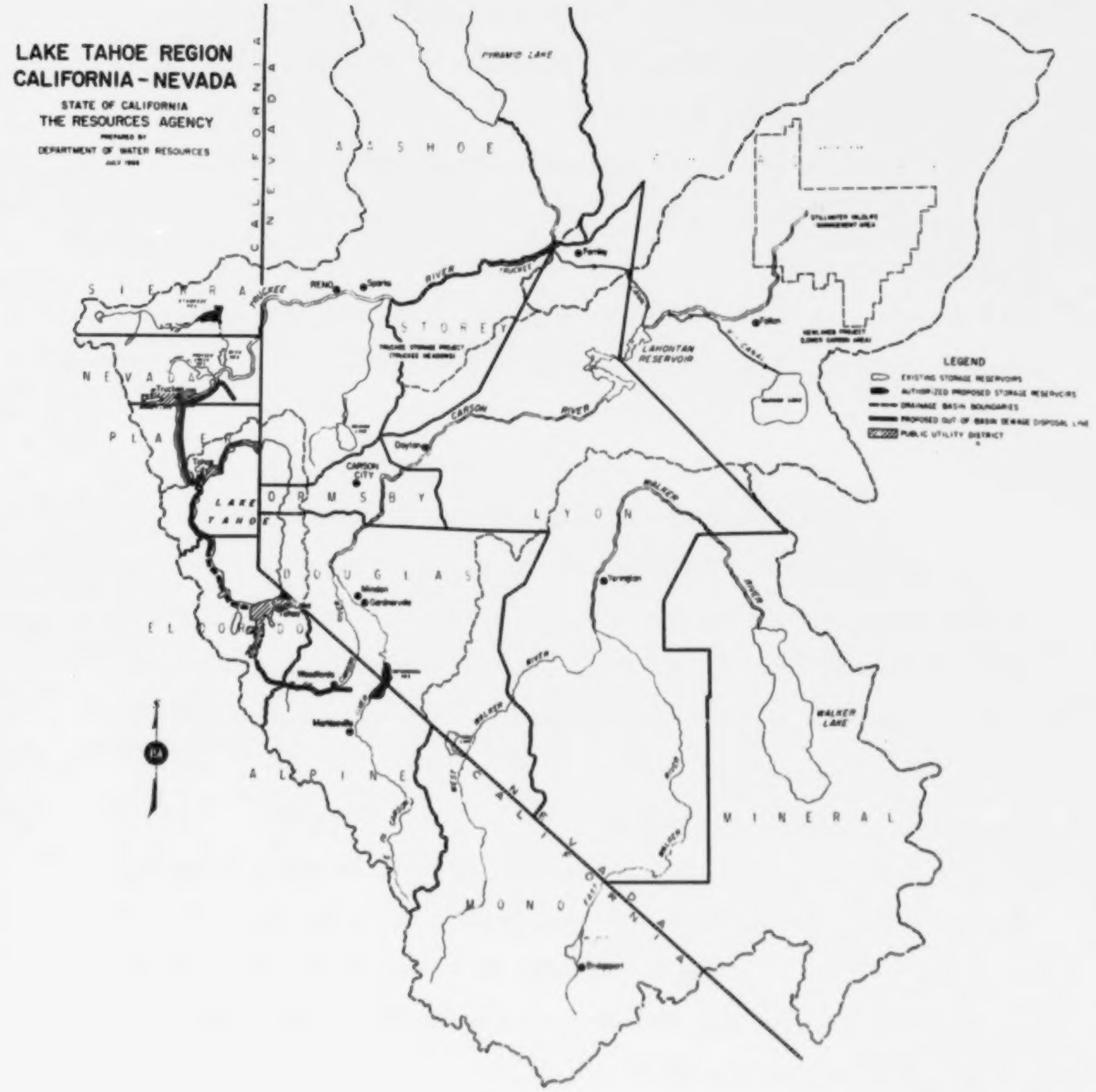
On June 23, Governor Brown advised Secretary Udall of California's concern over the apparent waste of water on the Newlands Project. We understand that loss of water within the distribution system of the Newlands Project exceeds ten times the estimated 12,000 acre-feet of sewage effluent which will be exported from the South Lake Tahoe area under full development. Such loss exceeds four times the 30,000 acre-feet yield of the proposed Stampede Project. Governor Brown urged the United States to retain the right to salvage water now wasted within this project.

We believe that the United States has an obligation to eliminate wasteful use of water within the Newlands Project. By so doing, sewage could be exported from the Lake Tahoe Basin without adversely affecting rights to use of water in the areas that are dependent upon water from Lake Tahoe and the Truckee River.

Summary

The Department of Water Resources will continue to assist in negotiations for an interstate compact. The Department will contract for water available to California from the Stampede Division. We will continue to work with the Lahontan Regional Water Quality Control Board in compiling water quality data on Lake Tahoe.

The Department of the Interior has the opportunity and we believe the obligation, to reduce the excessively large losses of water within the distribution system of its Newlands Project. The current need to export sewage effluent from Lake Tahoe so that the beauty of this scenic wonder is preserved, requires that this be done.



LAKE TAHOE REGION
CALIFORNIA - NEVADA

STATE OF CALIFORNIA
THE RESOURCES AGENCY
PREPARED BY
DEPARTMENT OF WATER RESOURCES
JULY [illegible]

CALIFORNIA
NEVADA
WASHOE
PYRAMID LAKE
SIERRA
NEVADA
PLACER
EL DORADO
ALPINE
MONO
STOREY
ORMSBY
DOUGLAS
LYON
MINERAL
LAKE TAHOE
TRUCKEE RIVER
CARSON RIVER
WALKER RIVER
WEST WALKER
EAST WALKER
WALKER LAKE
LAHONTAN RESERVOIR
CANAL
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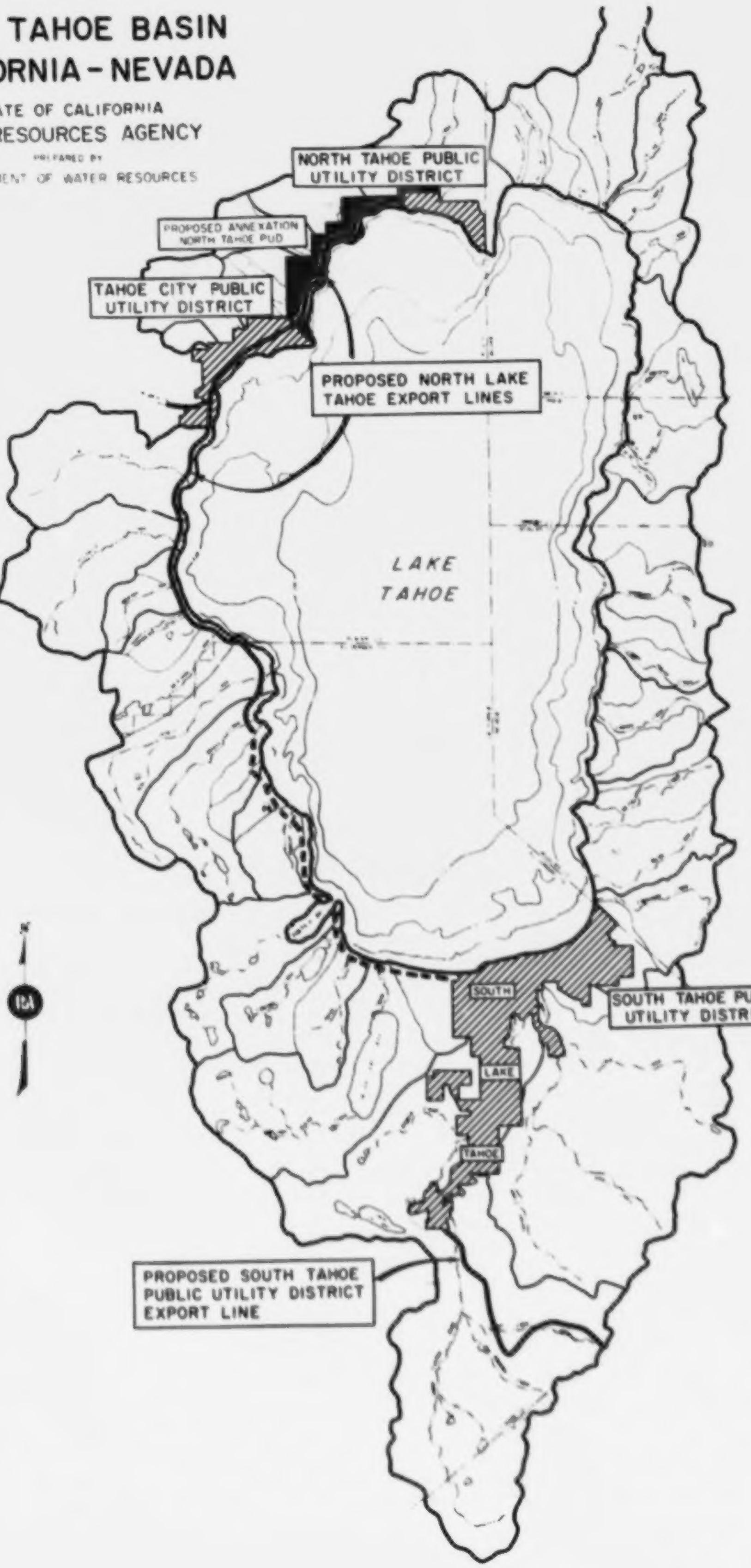
Dayton
CARSON CITY
Minden
Gardnerville
Markleeville
Yerington
Bridgeport
Truckee
Tahoe City
STILLWATER WILDLIFE MANAGEMENT AREA
NEWLANDS PROJECT (LOWER CARSON AREA)
TRUCKEE STORAGE PROJECT (TRUCKEE HEADWATERS)
LEGEND
EXISTING STORAGE RESERVOIRS
AUTHORIZED PROPOSED STORAGE RESERVOIRS
DRAINAGE BASIN BOUNDARIES
PROPOSED OUT OF BASIN SEWAGE DISPOSAL LINE
PUBLIC UTILITY DISTRICT

LAKE TAHOE BASIN
CALIFORNIA - NEVADA

STATE OF CALIFORNIA
THE RESOURCES AGENCY
PREPARED BY
DEPARTMENT OF WATER RESOURCES


NORTH TAHOE PUBLIC UTILITY DISTRICT
PROPOSED ANNEXATION NORTH TAHOE PUD
TAHOE CITY PUBLIC UTILITY DISTRICT
PROPOSED NORTH LAKE TAHOE EXPORT LINES
LAKE TAHOE
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LAKE
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PROPOSED SOUTH TAHOE PUBLIC UTILITY DISTRICT EXPORT LINE
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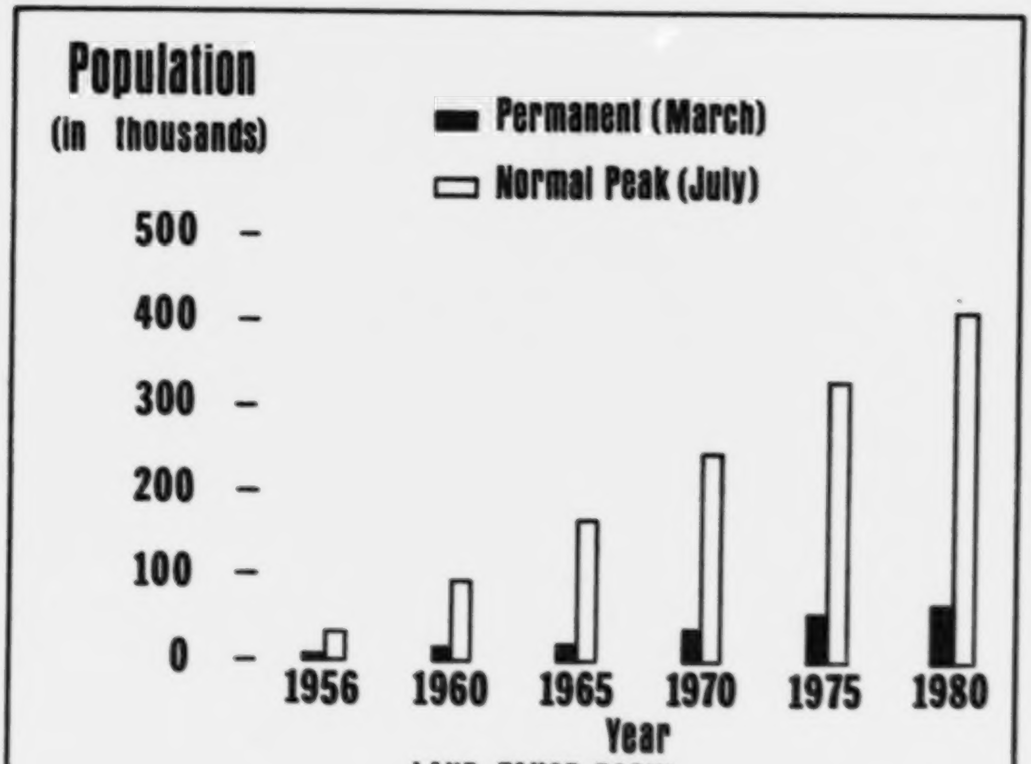


LAKE TAHOE BASIN
Estimated Population

*Estimates from the "Technical Supplement, Preliminary Plan Report, Lake Tahoe, 1980 Regional Plan Program". Estimates represent the Economic Potential of the area and not actual population growth trends. The 1980 Regional Plan for planning purposes, reduced these figures to "what they felt" the Tahoe Basin could support and provide housing, utilities and roadways, etc., for. The Figures they use for planning purposes are:

	1962	1980
Permanent Employed Residents....	16,000	49,000
Seasonal Employed Residents.....	6,200	20,000
Seasonal Recreational Residents.	27,100	60,000
All Residents	49,300	129,000
Tourists	77,000	184,000
TOTAL	126,300	313,000

There is no good information available on what the actual predicted population is expected to be.

PREPARED STATEMENT OF REGINALD C. PRICE, DEPUTY DIRECTOR OF POLICY, CALIFORNIA DEPARTMENT OF WATER RESOURCES, SACRAMENTO, CALIFORNIA

This conference is another important opportunity to focus public attention on the water problems of Lake Tahoe. It provides an occasion for California and Nevada to report action being taken to prevent this jewel of the Sierra Nevada from losing its luster as a scenic wonder.

This action can be successful only if the available land and water resources of this Basin are properly utilized, and nutrient sources, both natural and man made, are controlled to prevent any increase in the eutrophication of the Lake.

First let me briefly explain certain of the large display maps and charts which I have brought with me today. The first map, entitled "Lake Tahoe Region", shows Lake Tahoe, the cities of Reno and Sparks, Pyramid Lake and the Federal Newlands Project. This map also shows the location of the proposed Stampede Reservoir, a unit of the authorized Washoe Project. Water released from Lake Tahoe flows down the Truckee River where it is diverted in part by the cities of Reno and Sparks for municipal purposes and by the Truckee-Carson Irrigation District for irrigation use on the Newlands Project. Water not diverted by these agencies flows into Pyramid Lake. It is apparent that any use of water by any agency in either the Lake Tahoe or the Truckee Basin is interrelated to uses in the other basin.

The second map, entitled "Lake Tahoe Basin", shows the location of proposed lines to export sewage from Lake Tahoe Basin. This map also shows the South Tahoe, North Tahoe, and Tahoe City public utility districts. Also shown are the proposed annexations to and potential service areas of the public utility districts.

The last display shows graphically projections of the Basin's permanent population and summer population. The black bars display projected permanent populations and the red bars display projected summer peaks. It is clear that the population of the Basin is increasing at a rapid rate. It is also apparent that there is a considerable difference between the permanent population and the peak summertime population. This differential has a pronounced and obvious effect on planning and financing -- all governmental services in the area. The population figures shown here are taken from the Lake Tahoe Regional Planning Commission's 1980 Regional Plan report. Recent unofficial figures indicate that the actual current population is probably higher than that shown on the bar graph.

Provisional California-Nevada Interstate Compact

One of the most important current needs is to develop long-range solutions to all of Lake Tahoe's water problems. The State of California during the past decade has participated in negotiations with the State of Nevada designed to lead to an interstate compact for a division of the interstate waters of the Lake Tahoe, Truckee River, Carson River, and Walker River Basins, and also for control of the quality of these waters. The two States reached agreement on a provisional compact on October 29, 1965. The compact has been reviewed and commented upon by all the concerned local and state agencies. While the review by the Federal agencies has not been fully completed, most of the concerned Federal agencies have submitted their comments.

With respect to water supply, the provisional compact allocates water for existing uses.

It divides between the States the unused water in each basin in excess of existing uses. It allocates to the Lake Tahoe Basin a total of 34,000 acre-feet of water annually. Of this amount 23,000 acre-feet is for use in the California portion of the basin and 11,000 acre-feet in the Nevada portion.

With respect to water quality, the provisional compact provides that the water quality of Lake Tahoe shall be maintained at a level to protect the fishery resources and the recreational and domestic water supply uses. To preserve the clarity and purity of these waters, the provisional compact prohibits the discharge of any sewage plant effluents into the Lake or its tributaries unless health and water quality agencies of both States agree that no harm can result. The water quality control policy recently adopted by the Lahontan Regional and State water quality control boards contains more specific statements of water quality objectives. These statements are consitent with the general provisions of the provisional compact.

Under the compact, each state would retain the basic obligation of insuring that the quality of the waters of Lake Tahoe is maintained at a high level. The compact provides that when necessary to protect the health of the people and the quality of these waters the permanent Commission shall permit the export of waste water from the Basin. When approving the export of sewage effluent, the Commission is obligated to impose terms upon the exporter to prevent a reduction in the quantity of water which the downstream users are entitled to receive. The Commission could deny such export if it found that the exported waters would create a health or other hazard in the disposal area.

The Department is pleased to note your Administration's Report on Pollution in the Lake Tahoe Basin recognizes that the export of waste water from Lake Tahoe is essential at this time. The report states that the provisional compact's provisions relating to preventing a reduction of flow available to the Truckee River water users could delay and perhaps even preclude export of wastes. To meet this problem the California Compact Commission has recently proposed language for inclusion in the compact which would obligate the permanent Commission to require the export of sewage if such export is necessary to maintain the clarity of Lake Tahoe. The Commission continues to be obligated to impose terms to protect rights of downstream water users. California's proposal has not yet been acted upon by the Joint California-Nevada Interstate Compact Commission.

California will bring to the attention of the Joint California-Nevada Interstate Compact Commission your Report on Pollution in the Lake Tahoe Basin in order that your position be given adequate consideration.

Water Quality Programs

Several important water quality programs are conducted by the California Department of Water Resources in the Lake Tahoe area.

At three surface water stations, located on Lake Tahoe at Tahoe City, Truckee River near Truckee, and Truckee River near Farad, the Department monitors water quality. Water at these stations is sampled regularly and analyzed for key quality constituents. The Farad station is also operated as a station of the national water quality network of the Federal Water Pollution Control Administration.

The Department monitors the quality of ground water from a network of 24 wells located in the Tahoe area. Fifteen wells are located in the drainage basins tributary to Lake Tahoe, and 9 are located in the Truckee River Drainage below Lake Tahoe.

The Department participates in the California-Nevada Joint Water Quality Investigation, a program initiated in July 1965. Participants include the States of California and Nevada, the Counties of El Dorado and Placer in California, and your Administration. The purpose of this joint investigation is to monitor the overall quality of the Lake and to identify seasonal and annual quality variations in order to detect increases in the rate of eutrophication at the earliest possible time. We conduct all field activities, provide general coordination of the program, and compile all data into a quarterly report. We also compile an annual report which presents basic data and evaluates the previous year's program. The first year's work has established current, base-line conditions against which future changes will be measured.

The Department provides technical advice to the Lahontan Regional Water Quality Control Board on sewage export proposals. This advice includes information on historic water quality and flow characteristics of receiving waters. Such information was utilized by the Regional and State water quality control boards in developing their recently adopted water quality control policy for the Basin.

Finally, the Department takes periodic samples of the effluent from three sewage treatment plants located at South Tahoe, North Tahoe, and Tahoe City. Analyses of these samples provides data on the reclamation of waste waters.

Reginald Price

Water From Proposed Stampede Reservoir

You are aware that the Bureau of Reclamation plans to begin construction of the Stampede Division of the authorized Washoe Project in the near future. Stampede Dam and Reservoir will be a multiple-purpose project in California on a tributary of the Truckee River. Since the Truckee River is an interstate stream, the project's water conservation benefits will accrue to both California and Nevada.

The construction of new water storage facilities will provide additional water to meet the increasing needs of the expanding populations in both States. California beneficiaries of this water supply will utilize project water by exchange. Throughout the Truckee River and Lake Tahoe Basins, water will be diverted where available and a like amount of water will be released from Stampede Reservoir, if required, to satisfy the rights of existing downstream water users.

Governor Edmund G. Brown included as a special call item in the 1966 First Extraordinary Session of the Legislature the subject of authority for the State to contract for water from the Stampede Division. The Legislature enacted and Governor Brown approved Senate Bill 15, which provides this authority. California will now proceed to contract for its share of the available water, which is estimated to be 4,300 acre-feet annually.

Our studies show that water users in Sierra, Nevada, and Placer Counties can fully utilize this new water by about year 2000.

The provisional compact provides that the export of sewage effluent shall not adversely affect downstream users by reducing the water supply to which they are entitled below that which would be available if all water allocated to the Lake Tahoe Basin was being utilized and no export was occurring.

Therefore, it may become necessary to provide a supplemental supply of water to the Basin to offset the effect of export on the water supply available to the downstream users. During the initial years, until such time as Sierra, Nevada, and Placer Counties can fully utilize the yield of Stampede water allocated to California, surplus water may be utilized in the El Dorado and Placer County portions of the basin for beneficial uses, including possible replacement of exported sewage effluent.

The Department will assist in negotiating the necessary arrangements for utilization of Stampede water.

Use of Water Within the Newlands Project

The State and the local agencies within California are proceeding to contract for water from the authorized Stampede Division to assure that California's use of water will not adversely affect the ability of downstream users to divert the water to which they are entitled. California's ability to accomplish this objective will depend to a large degree upon the proposed allocation of water from the Lake Tahoe -- Truckee River -- Carson River system to the Truckee-Carson Irrigation District for use on the Federal Newlands Project.

The United States supplies water from this system to the District through the facilities of the Newlands Project. The diversion of water to the Newlands Project under rights of the United States is the largest single use of water from this system. We understand that the Department of the Interior is negotiating with the District for a determination of the allocation of water to the Newlands Project.

The District has expressed concern that the export of sewage effluent from the Lake Tahoe Basin will adversely affect its water supply. If the quantity of water allocated to the Newlands Project is unreasonably high, it will impose an unnecessary and undue financial burden upon the Lake Tahoe agencies in their efforts to export sewage effluent without adversely affecting the rights of downstream users of which the Newlands Project is one.

In order to assure that the needs of the Lake Tahoe Basin are given adequate consideration , we urge if you are not already doing so that the Federal Water Pollution Control Administration take an active part in the negotiations between the Department of the Interior and the Truckee-Carson Irrigation District.

On June 23, Governor Brown advised Secretary Udall of California's concern over the apparent waste of water on the Newlands Project. We understand that loss of water within the distribution system of the Newlands Project exceeds ten times the estimated 12,000 acre-feet of sewage effluent which will be exported from the South Lake Tahoe area under full development. Such loss exceeds four times the 30,000 acre-feet yield of the proposed Stampede Project. Governor Brown urged the United States to retain the right to salvage water now wasted within this project.

We believe that the United States has an obligation to eliminate wasteful use of water within the Newlands Project. By so doing, sewage could be exported from the Lake Tahoe Basin without adversely affecting rights to use of water in the areas that are dependent upon water from Lake Tahoe and the Truckee River.

Summary

The Department of Water Resources will continue to assist in negotiations for an interstate compact. The Department will contract for water available to California from the Stampede Division. We will continue to work with the Lahontan Regional Water Quality Control Board in compiling water quality data on Lake Tahoe.

The Department of the Interior has the opportunity and we believe the obligation, to reduce the excessively large losses of water within the distribution system of its Newlands Project. The current need to export sewage effluent from Lake Tahoe so that the beauty of this scenic wonder is preserved, requires that this be done.

CHAIRMAN STEIN: Thank you. Are there any comments or questions?

MR. WHITE: Can I have a minute, please.

CHAIRMAN STEIN: Yes. While Mr. White is conferring, I would like to say your points are very well taken, and, as you will appreciate, this is not a unique kind of controversy.

MR. PRICE: We appreciate this, Mr. Chairman. The new situation which results from the juxtaposition within the Interior Department of the Administration and the negotiation of this by the Bureau of Reclamation and others provides a special opportunity to assure that this means of saving water can be realized to a necessary degree.

CHAIRMAN STEIN: We recognize that. Again, I think that if the people will read the public record -- and I won't speak for Commissioner Quigley because he can speak for himself -- they will know where we stand on this matter. The problem is a difficult one, as you know. When you talk in terms of the distribution system in the Newlands Project, a loss of water exceeding 10 times the estimated 12,000 acre-feet, etc., and refer to this as a waste of water, people who are dealing with these projects consider this a normal kind of operation.

You pointed to the road building in this valley, and the silt coming off is no different than what happens to the roads of a mountainous area of the West.

You deal with the people working with these problems and you talk about what you might call a waste of water. They say, "That is no different than what happens in other irrigation projects." This is recognized. I have full sympathy with your point of view. I am sure, in dealing with this problem, we recognize the point of view on the other side of this question.

MR. PRICE: Thank you, Mr. Chairman.

MR. FISHER: I want to make a comment on that.

Since you brought up the question of highways, I can assure you that the construction of highways on the west side of Lake Tahoe will no longer be governed solely by consideration of user benefits of the highways themselves. We have good control on those in the law in the State of California. The user benefits that might be expected to be maximized just by consideration of highway programs will no longer apply and do not now apply as a result of the legislation on the California side.

So, the comparison is quite interesting but not entirely true. It's not entirely a correct analogy.

MR. PRICE: Mr. Chairman, we are dealing here with a water-short area. Mr. Fisher brought out in his questioning this morning the relationship between water supply and water quality. This is an instance in which, on account of the losses that are associated with unlined canals, there are losses which can be prevented and it is these losses which I refer to here.

be
It would not even/necessary to eliminate these losses completely to still more than compensate for the amount of water that might be pumped from the Basin in full requirements for the pumping of all sewage effluent from the Basin. In other words, it is not necessary that the full amount of loss be saved -- only a relatively small share.

CHAIRMAN STEIN: I think we recognize that. Mr. White, do you want to ask a question?

MR. WHITE: I do not want to ask a question. I did want to comment. In going into this area of water supply there is nowhere in Nevada where you can have a more controversial or a dangerous subject.

My first job was distributing water. I have been shot at and I am not sure this is not the last shot that will be taken.

I think the discussion does point out, however, not only that we have nutrients that may cause algae, but there are many other things that cause algal. We have got a lot of interest here. There has got to be a give and take and I am not about to comment on the agricultural practices at Fallon and I was interested first in the point of view of the managers of the Newlands Project. They will tell me this is new. There will be other discussions on it, but you see what we have here on one side is the waste of water, and I don't think there is any argument that if this can be saved it will be saved. I think in the agricultural practices there is progress here the same as there is in sewage disposal and in conservation of water.

I think it is reasonable if we would use this, but when it comes to export we like the same kind of charity to be extended to us in making this work and live with the limited supply of water we have.

When we get to road building -- we have had real large requests this year to dump the fill from the road construction into the lake. These are things that have been fixed with our various discussions, and I think that as we go on, if we had time with this task and study committee, we could tell you almost every one of these things are having some consideration. Protective devices are being considered and will be acted on by the two Legislatures shortly.

CHAIRMAN STEIN: May I ask one question?

Really for clarification for the Federal people, let's suppose the planning will come. Let's suppose we can line some of these canals or save what we consider a waste of water.

Is there any assurance this water will be made available for the purposes you indicate, or will prior appropriations take this water anyway? Is there a way out?

MR. PRICE: Mr. Chairman, it would be my thought that such assurance would probably be encompassed within the scope of the contract that is presently being negotiated, so that there would be an assurance that such water could be made available to fulfill the requirements in the Lake Tahoe Basin relative to the needs for pumping sewage effluent out of the Basin.

CHAIRMAN STEIN: Let me ask one further question on this:
In some of the other western states under the appropriation doctrine where this question has come up, they indicated that an arrangement like that would be contrary to state law. Do you see any inhibition to this in Nevada or California?

MR. FISHER: I think I can answer that. The allocation involved here is the question of compact which becomes a question of Federal law and the project under consideration here is a Federally-financed project and part of which I think -- but I will ask you, Mr. Price -- a part of which lays outside of the drainage area of the Truckee-Tahoe Basin, is that correct?

MR. PRICE: The Newlands Project is outside the Lake Tahoe Basin.

MR. FISHER: The additional water we are talking about for addition to this project is in effect exported from the Basin itself.

MR. PRICE: Water comes from the Lake Tahoe and down the Truckee River, is diverted through the Truckee Canal and by that means reaches the Newlands Project for utilization there. This is the water to which we are referring.

CHAIRMAN STEIN: Thank you.

MR. PRICE: Thank you, Mr. Chairman.

CHAIRMAN STEIN: Mr. Fisher?

MR. FISHER: No further questions. I would like to call Francis Longo, a member of the Lahontan Regional Quality Control Board, who will present the formal statement and summarize. He speaks for himself and Mr. Jack Leggett, the Executive Officer of that Board.

STATEMENT OF FRANCIS LONGO, LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD, BISHOP, CALIFORNIA

MR. LONGO: Thank you. Mr. Chairman, Conferees, the statement that is prepared is on file with you and I will attempt to be brief.

My name is Francis Longo. I am a member of the Lahontan Regional Water Quality Control Board which is the California State agency charged with the responsibility of maintaining the water quality of Lake Tahoe as well as all other streams and lakes on the east side of the Sierra-Nevada mountain range. The Lahontan Board is one of nine boards in California given this regional responsibility. As is the case of the Lahontan Board, Regional Board boundaries throughout California are predicated on a watershed basis. The activities of the regional board are coordinated by the State Water Quality Control Board.

The California Water Quality Control Act authorizes the Regional Boards to establish and enforce discharge requirements on all waste waters discharged within their region. It further authorizes the regional boards to adopt water quality control policies on all waters within their region.

I would like to review the more important steps that have been taken to date, in recognizing the problems associated with Lake Tahoe, and in formulating a policy for controlling all factors relevant to water quality control.

The problem itself was an active issue back in 1958.

Recognition of the potential problem at Lake Tahoe was realized many years ago. In 1958, when human activity was limited to summer tourists, with only a handful of permanent residents, the Lahontan Board passed a resolution requiring that all sewage be retained on land.

Since that time several significant steps have been taken. The eventual need for export was first expressed in 1958 when the South Tahoe Public Utility District employed an engineering firm to study its waste disposal problems. The engineering report stated the need for export but stressed the financial infeasibility of export at that time. The necessary financial support for such a vast undertaking was not available.

Since that early date, export has been the policy and work has proceeded with the close cooperation of California and Nevada toward this eventual goal.

As population increased, and the summer sewage problems became increasingly complex, the Lake Tahoe Area Council, at the request of the Lahontan Board and the Nevada authorities, employed a Board of nationally recognized experts to study the waste disposal problem associated with the entire Tahoe Basin. The two States cooperated closely, and the resulting report, published in 1963, became the basis for the present export plans for both California and Nevada.

Although there is an extensive list of developments over the past 10 years, I feel no need to expound upon the subject. We are concerned here only with present policies, actions and developments directly related to water quality control.

Early last fall Governor Brown, realizing the importance of Lake Tahoe, requested that the Lahontan Regional Board take immediate steps to establish an effective water quality control policy for Lake Tahoe.

I would like to review this policy, which was adopted at a joint public hearing of the Regional and State Boards in June of this year, to show you clearly the steps that have been taken regarding the many factors that affect the water quality of Lake Tahoe.

In formulating the policy, a task force was established. The Task Force included representatives of all concerned California and Nevada state and county agencies. This assured us that the interests of both states, and their various agencies, would be considered.

The work was guided by the same board of consultants which prepared the comprehensive study in 1963.

The objective of the policy is clearly stated, "to maintain the waters of Lake Tahoe in their present natural state of crystal clarity and pristine purity, and to protect all beneficial uses of the lake waters".

The beneficial uses the policy will protect include aesthetics, boating, domestic water supply, fish and other aquatic life and fishing, industrial water supply, irrigation water supply, power generation, and water contact sports. The protection of the water's quality for commonly considered beneficial uses could permit drastic reductions in present quality, whereas the inclusion of aesthetics as a beneficial use demands preservation of present high quality conditions.

Water quality standards, as required by the 1965 Federal Water Pollution Control Act, are established. The Standards include limits for Bacteriological Quality, Biological Enrichment, Chemical Purity and Physical Nature. These standards closely define present water quality conditions. The chart partially compares Lake Tahoe Standards with United States Public Health Service Drinking Water Standards, and shows our intention to maintain Lake Tahoe's water quality far superior to even drinking water standards.

No adverse changes in water quality will be permitted. As authorized by present state legislation, this board will correct any activity which degrades or threatens to degrade Lake Tahoe's waters below the established standards.

Enforcement of these standards by the powers presently vested in the Lahontan Board, will assure abatement of any condition which threatens the present crystal clarity and pristine purity of Lake Tahoe's waters. The present climate, of local and states attitudes, will assure immediate legal action to abate any condition which threatens to degrade the waters. By enforcement of these standards the waters of Lake Tahoe will be maintained in their present highly pure condition. They will not become polluted, nor will they approach a condition of pollution.

Policies for controlling water quality, as stated in the report, prohibit disposal of any deleterious materials to the surface waters of the Tahoe Basin, and discourage land disposal within the Basin. The policy promotes the export of all liquid and solid wastes, and encourages development of sewerage facilities to export all waste waters generated within the basin. Controls are recommended for shoreline development, construction and maintenance practices, storm water runoff, land clearing, and all other factors which contribute turbidity to the surface waters of the Tahoe Basin. The report encourages actions for controlling construction of piers, docks, breakwaters, lagoons and all structures or changes in the shoreline which affect the natural circulation of the lake waters.

These policies are presently being implemented. The Utility Districts are proceeding as rapidly as finances become available to achieve export of all sewage generated within the Basin. The County Health Departments have begun work toward the export of all garbage. Factors affecting siltation have been recognized. The county and local agencies are presently formulating ordinances for controlling shoreline development.

Work toward implementing the policies is proceeding much more rapidly than anticipated. The policy has offered the necessary guidance and support, and complete implementation is proceeding under State, County and District powers.

The figures in the report show a large percentage of the presently developed lands to be within existing sanitary utility district boundaries. It is important to note that the proposed district expansions will include all developable lands within the California portion of the Tahoe Basin. The only limiting factor controlling just when district boundaries can include the entire Basin is finances.

A surveillance program is included to determine compliance with the policy. The program provides for monthly surveillance of all established standards. This surveillance program will be used to monitor the lake, and is designed to detect any adverse changes in water quality.

The Lahontan Regional Board is charged with the responsibility of establishing discharge requirements on both the export from the South Shore to Diamond Valley and the export from the North Shore to an area below Truckee.

The South Shore export plan will carry tertiary treated and well disinfected effluent into a proposed reservoir with a capacity of 4000 acre-feet in Alpine County. The area to receive the highly treated effluent is presently water deficiant and in need of additional water for irrigation purposes. The additional water will greatly aid the economy of Alpine County.

Discharge requirements will be established by this Board specifying a highly treated, well oxidized adequately disinfected effluent.

Francis Longo

The requirements will specify land disposal of the treated effluent. There will be no discharge to surface waters. Although it must be understood that any water within the Carson River Basin will eventually reach the river, the high quality of the effluent, plus land disposal, will assure the downstream users of the Carson River a water of excellent quality to meet all beneficial uses.

The export plans for the North Shore area, known as Plan "B", will also produce an effluent of extremely high quality. Disinfected secondary effluent will be disposed of by percolation through soil. It is again recognized that these waters will eventually reach the Truckee River. The discharge requirements to be established by the Lahontan Board for the ultimate receiving waters will protect all downstream beneficial uses.

Present waste disposal methods in the Truckee River Basin below Lake Tahoe, although confined to land, do not adequately serve the developed areas of Donner Lake, Alpine Meadows, Squaw Valley, and Truckee. The export plans will collect and treat all sewage from these areas, greatly improving the water quality outlook for the Donner Lake area, and assuring the Truckee and downstream areas of an excellent water supply.

The Lahontan Regional Board is also presently charged with the responsibility of establishing Water Quality Control Policies on both the Truckee and Carson Rivers as we have done on Lake Tahoe. These policies will very specifically protect all present and future beneficial uses of both streams.

The Lahontan Board fully endorses the export plans of the utility districts within the Tahoe Basin.

They are well conceived; they include all developable areas of the Lake Tahoe and the Lower Truckee River Basin, and are a failsafe solution to the potential problems. The export plans are designed to accommodate the ultimate requirements for all sewage generated within the Basin.

The State of Nevada has worked closely with us in the development of both the North Shore and the South Shore export systems. They are the result of many years of cooperative effort between the two States. We are confident that the State of Nevada fully endorses these export systems.

Thank you.

CHAIRMAN STEIN: Thank you. Are there any comments or questions?

MR. FISHER: No.

CHAIRMAN STEIN: Thank you. Just one moment. Mr. White?

MR. WHITE: In the export from South Tahoe, do I understand you to say that the exported effluent is tertiary treated effluent?

MR. LONGO: Right.

MR. WHITE: What B.O.D. would you anticipate, then?

MR. LONGO: With the permission of the Chairman, could I call upon our staff executive, Mr. Leggett, to answer the technical questions?

CHAIRMAN STEIN: All right. May we have Mr. Leggett, please?

MR. LONGO: Mr. Leggett, the question was what B.O.D. would the tertiary treated effluent -- what would be the B.O.D. of this discharge?

MR. LEGGETT: It has been reported to us by the South Tahoe Public Utility District that they can, with their tertiary treatment, reduce their effluent down on that to an average of two parts per million. Our requirements would probably be within the neighborhood of five or six parts per million.

MR. WHITE: Was this what they anticipate exporting?

MR. LEGGETT: These are the requirements and they cannot export it unless it does meet these export requirements.

MR. WHITE: You mean their requirements would be three parts?

MR. LEGGETT: Probably about five parts per million. Do you understand that this waste water will be confined to land. It will be disposed of into a 4,000 acre-foot reservoir, where it will be used over the year for irrigation of hay crops.

Now, this is excellent water for irrigation of hay crops.

MR. WHITE: I wasn't questioning you at all. I was simply wondering if you were going to export this quality of effluent over there.

MR. FISHER: I think this question might be answered by Mr. Bruns when he comes. He will be here tomorrow.

Mr. Chairman, you have received a statement by Mr. Irving Goldfeder, who is Chairman of the State Water Quality Control Board, which I would like to have entered in full in the minutes.

CHAIRMAN STEIN: It will be done.

STATEMENT OF IRVING GOLDFEDER, CHAIRMAN, CALIFORNIA STATE WATER QUALITY CONTROL BOARD, SACRAMENTO, CALIFORNIA

My name is Irving Goldfeder, Chairman of the State Water Quality Control Board. I appreciate the opportunity to appear at this conference and briefly outline the State and regional boards' relationships in water quality control policy formulation.

Mr. Fisher, Administrator of the Resources Agency has previously presented the role of the various State departments in water quality activities, so I shall not dwell on this matter, except to say, that the legislative and administrative units of California government have diligently faced their water quality control responsibilities and intend to continue to protect the quality of the State's waters.

Irving Goldfeder

We believe that California is the first State to adopt a water quality control policy for an interstate water of national concern -- Lake Tahoe.

Under the Water Quality Control Act of 1965, the State Board shall formulate and adopt a statewide policy for water quality control, and the regional boards adopt water quality control policy where water quality is primarily a matter of regional concern. Before regional water quality control policy becomes effective, the State Board has an opportunity to review such policy and it becomes effective unless disapproved within 60 days by the State Board.

In development of future policies and/or standards on interstate waters, the same pattern will be followed. That is, policy formulation will be initiated by the respective regional board with subsequent consideration for adoption by the State Board; since the State Board is the official water quality control agency designated to adopt policy.

The Tahoe Water Quality Control Policy was formulated by the Lahontan Regional Water Quality Control Board in close cooperation with the State Board and other affected agencies of California and the State of Nevada. The Lahontan Regional Water Quality Control Board adopted this policy in June and the State Board approved this policy as regional policy. Governor Brown submitted this policy statement to Secretary Stewart Udall as the first step in complying with provisions of the Federal legislation. The State will, before June 30, 1967, develop the required implementation and enforcement program.

I would like to call to your attention that through fiscal year 1965-66 five projects in the Lake Tahoe Area have been certified by the State Board in the grant amount of $794,000 and a total project cost of $3.6 million for a grant under P.L. 84-660.

In process now are 12 projects for construction grants including construction of force mains to export treated sewage out of the Lake Tahoe Basin. California intends to continue providing for Statewide water quality control and meeting its commitments for interstate waters under the Federal Water Quality Control Act.

MR. FISHER: And that confirms action of the Regional Board and makes it a State-wide policy. That takes care of Mr. Goldfeder.

Mr. Bonderson will file, I think, a statement, a written statement, from Mr. Hubert Bruns tomorrow and I would like to close by filing a statement of Mr. Richard Graves, Chairman of the Lake Tahoe Joint Study Committee, which I would like to be included in the minutes in full.

I will merely quote two sentences from that consideration. He points out that the Committee's preliminary report will not be released and subjected to public hearings until the Fall. The final report will be filed with the respective Legislature in January of next year, but he makes the following statement, "...decisions have already become clearly predicatable which have an important bearing on the subject of this Conference.

The Committee will recommend the formation of the Basin-wide agency.

The Committee will recommend that the Agency have adequate powers to prevent land developments in the Lake Tahoe Basin which threaten to destroy the present high quality of the Lake's waters."

That, I would like to show as part of the record.

CHAIRMAN STEIN: That will show without objection.

STATEMENT OF RICHARD GRAVES, CHAIRMAN, LAKE TAHOE JOINT STUDY COMMITTEE, LOS ANGELES, CALIFORNIA

In 1965 the Legislatures of California and Nevada by parallel legislation established the Lake Tahoe Joint Study Committee.

The Committee consists of nine members selected as follows. Each of three counties in both California and Nevada appointed a member. The Governor of each state appointed a member and the eight persons so appointed selected a ninth member and elected a chairman. I am the ninth member and I am also Chairman.

The broad charge to the Study Committe was to study and report on the need for a basin-wide agency to insure the orderly development of the Lake Tahoe Basin; and if such a need were found to exist, to make specific recommendations to the Legislatures and Governors of each state as to the structure, functions, powers and duties of such a basin-wide agency. The Committee was instructed to submit its recommendations in January 1967.

The Joint Committee has held numerous formal meetings and received testimony from many witnesses, official and unofficial. It has employed a regular professional staff to research and report on all relevant experience in the United States with inter-state or inter-local governmental arrangements.

The Committee's preliminary report will not be released and subjected to public hearings until next fall but certain broad decisions have already become clearly predictable which have an important bearing on the subject of this Conference.

1. The Committee will recommend the formation of a basin-wide agency.
2. The Committee will recommend that the Agency have adequate powers to prevent land developments in the Lake Tahoe Basin which threaten to destroy the present high quality of the lake's waters.

In the testimony at this Conference it has been pointed out that there are several aspects of land development for which adequate governmental controls are not now available or are not adequate to protect the Lake. It is to these specific areas that the Committee's recommendations will be directed.

While it would be our firm hope and expectation that this Agency would accomplish its objectives primarily through the actions of existing local governments in the Basin, it would furnish the mechanism for insuring that a truly regional approach is made to these problems that affect the region as a whole.

The effectiveness of the Agency would consist in large part, of the fact that it would serve as the vehicle by which Local, State and Federal Governments can cooperate in solving the problems of orderly development of the Lake Tahoe Basin.

MR. FISHER: And I think because of the limit of time, we will prefer to wait with our next several witnesses until tomorrow. Did you want to meet early? We will be here at 7:00 a.m., if you need us.

CHAIRMAN STEIN: I think not. I don't think our experts are here yet. One of our experts, the man who wrote the report, just arrived. Our Biologist is not here yet, he is the one we may want to put on.

MR. FISHER: Just tell them to go to bed when they arrive.

CHAIRMAN STEIN: That is what I did with some of our boys last night and wasn't very successful. We will stand recessed until 9:00 a.m. tomorrow.

(Whereupon the Conference recessed until 9:00 a.m.)

Tuesday, July 19, 1966

Morning Session

CHAIRMAN STEIN: May we reconvene, please.

We will continue with the agenda. In order to close the gaps that we had yesterday caused by the airplane strike and some other problems, we will call on Mr. Schreeder to complete the Federal presentation.

Mr. Schreeder?

MR. SCHREEDER: I would like to introduce the members of the Technical Sanitary Engineering Center at Cincinnati: Mr. Kittrell, Mr. West, Mr. Mackenthun. At a later time in the schedule, I, the Nevada, and California Conferees will probably have some questions they wish to ask these people and Mr. Stein will make this opportunity available I am sure.

There was some mention yesterday that a good part of the land in the Tahoe Basin is owned by the Federal Government. A vast majority of it is operated, I understand, by the Forest Service. We are very happy to have with us this morning Mr. Douglas Leisz, Supervisor of the El Dorado National Forest and Mr. Leisz is going to be able to speak for the United States Forest Service. Mr. Leisz?

STATEMENT OF DOUGLAS R. LEISZ, FOREST SUPERVISOR, EL DORADO NATIONAL FOREST, FOREST SERVICE, DEPARTMENT OF AGRICULTURE, PLACERVILLE, CALIFORNIA

MR. LEISZ: Mr. Chairman, Conferees, members, ladies and gentlemen, I have a very short statement covering Forest Service activities in the Basin. I hope this may develop some questions so that we can provide

Douglas R. Leisz

any information that should be entered into the record of this conference.

Parts of three National Forests lie within the Lake Tahoe Basin. These are the El Dorado and Tahoe National Forests in the California Region and the Toiyabe National Forest, Nevada, in the Intermountain Region.

There are about 95,000 acres of United States land under management of the U. S. Forest Service. This is approximately 45 percent of the land area in the Tahoe Basin.

Safe-guarding the quality of water in Lake Tahoe and in its tributary streams and other lakes is a primary objective of the "Forest Service Multiple Use Management Plan for National Forest Land" (1962).

Two essential factors of water pollution control are:

1. Soil stabilization or erosion control.
2. Sewage collection, treatment, and disposal.

Forest Service programs on National Forest land are designed to make adequate provision for soil stabilization and erosion control.

It is our intent to follow carefully the requirements of the Federal Water Pollution Control Act and Executive Order No. 11258, which relate to prevention and control of water pollution from Federal installations and property in the Lake Tahoe Basin. Our intent is to cooperate fully with the Federal Water Pollution Control Administration and with state and local agencies in the treatment and disposal of sewage and other wastes from Forest Service public campgrounds, Ranger Stations, and other installations under control of the Forest Service.

Douglas R. Leisz

The Forest Service is fully in accord with the proposed plan to transport all sewage effluent out of the Lake Tahoe Basin, assuming that acceptable arrangements can be made for disposal outside the Basin. Preliminary plans and negotiations are under way for connecting Federal systems in the Pope, Baldwin, and Camp Richardson area to South Tahoe Public Utility District sewage system. Funds for this have been requested, and final plans and construction will follow financing. These installations presently serve approximately 8,000 people on a peak summer day. A continuing program is anticipated to connect other unsewaged installations on National Forest lands in the Tahoe Basin to municipal sewer systems.

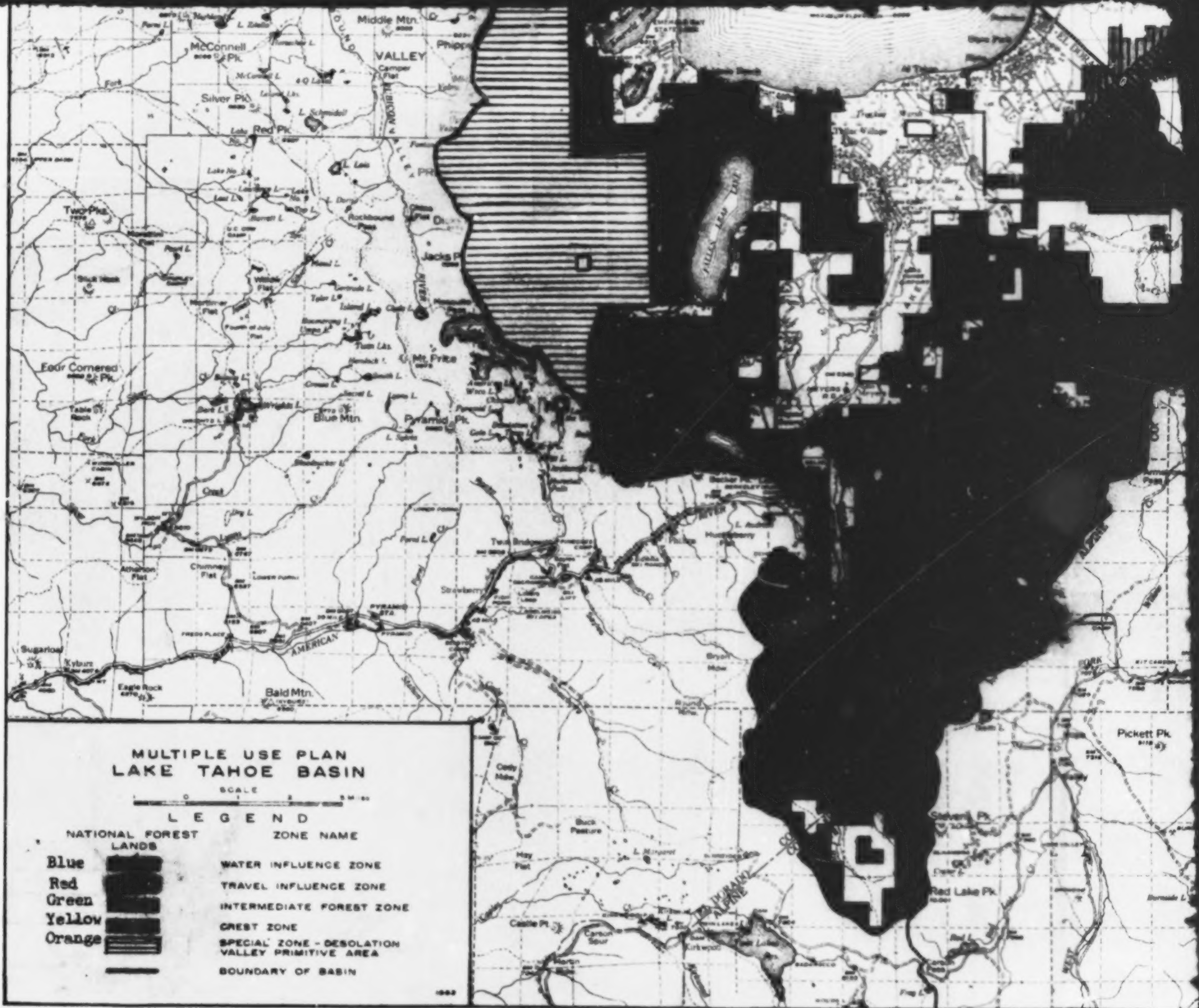
Temporary disposal of sewage effluent has been permitted on National Forest land as a temporary expedient, under the advice of the local, state and Federal Public Health Services. We do not consider this to be satisfactory land management practice in the Tahoe Basin. Export should be the permanent solution.

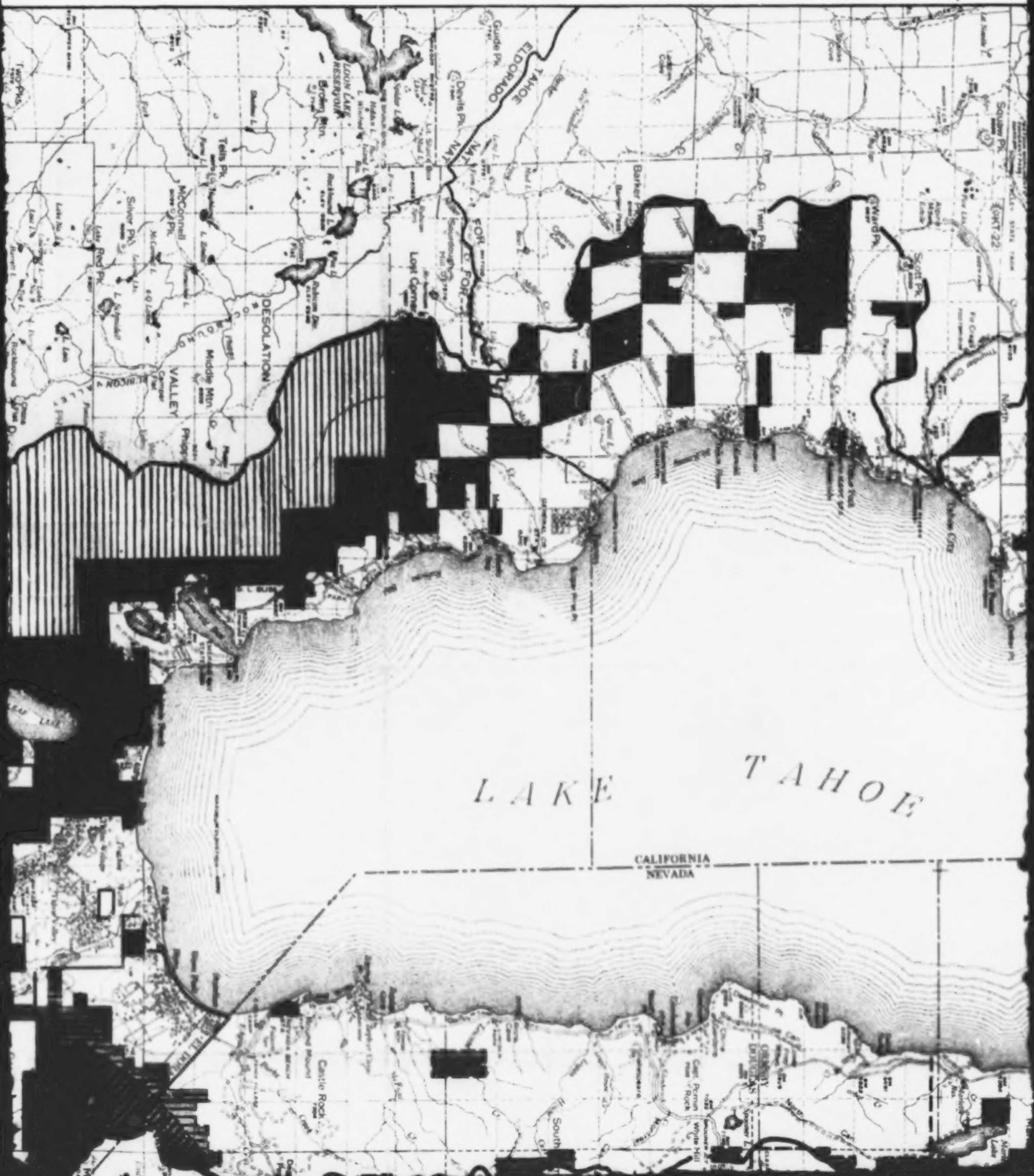
That's the end of the short, prepared statement.

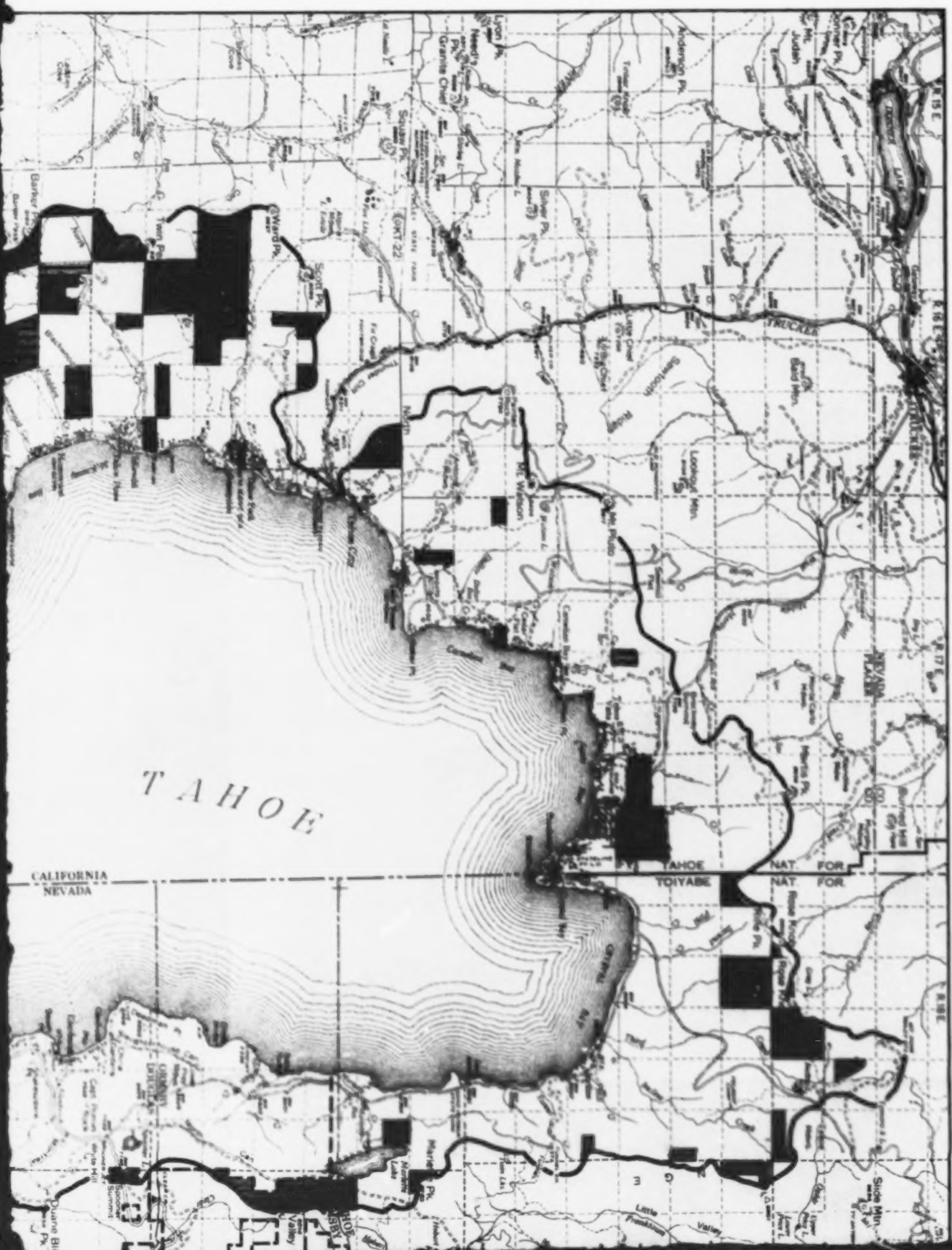
I would like to make reference to the two exhibits I have here. The map or the nearest exhibit on my right represents the extent of National Forest lands within the Tahoe Basin. The colored lands are National Forest lands. The various coloring represents land use zoning as we see it for the Federal lands.

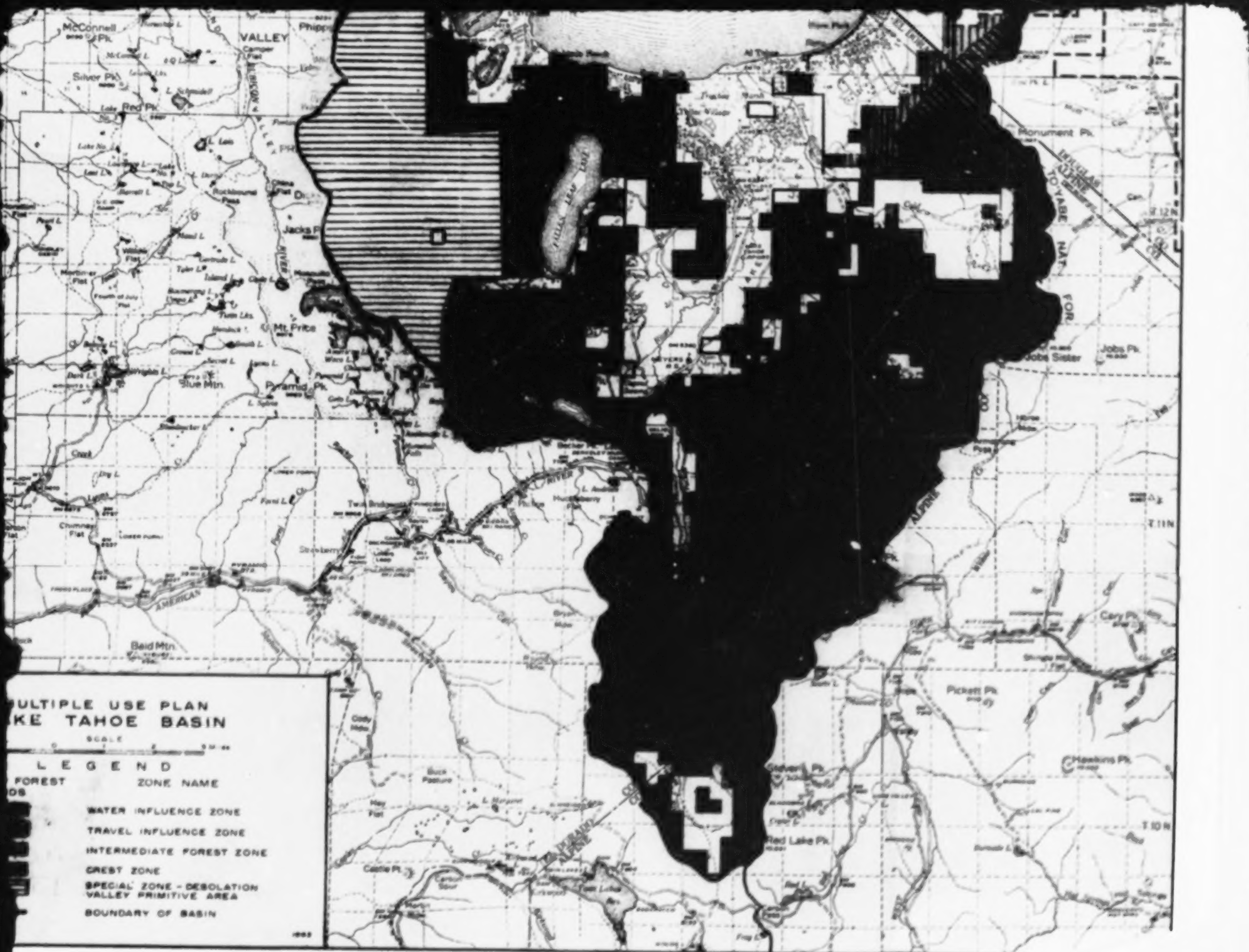
You will notice that the Federal lands are collected very heavily at the south and west end of Lake Tahoe.

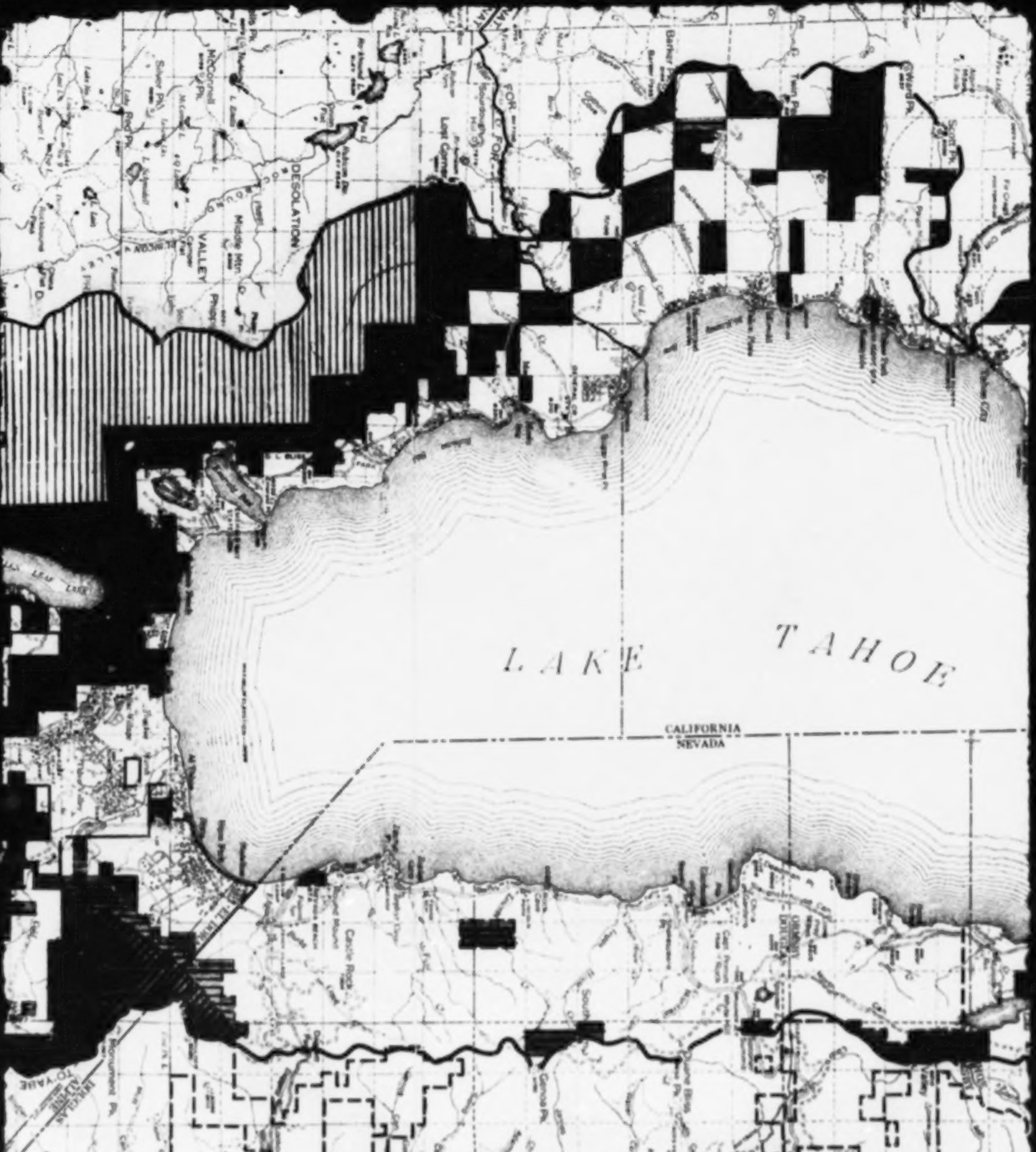
A few additional facts: Only four miles of the 71 mile shoreline of the lake are National Forest lands. The land use zoning, the blue


MULTIPLE USE PLAN
LAKE TAHOE BASIN
SCALE
LEGEND
NATIONAL FOREST LANDS
ZONE NAME
Blue
WATER INFLUENCE ZONE
Red
TRAVEL INFLUENCE ZONE
Green
INTERMEDIATE FOREST ZONE
Yellow
CREST ZONE
Orange
SPECIAL ZONE - DESOLATION VALLEY PRIMITIVE AREA
BOUNDARY OF BASIN
Middle Mtn.
McConnell Pk.
VALLEY
Silver Pk.
Red Pk.
Twin Pks.
Jacks Pk.
Mt. Price
Four Cornered Pk.
Blue Mtn.
Pyramid Pk.
Fallen Leaf Lake
Chimney Flat
Atherton Flat
Strawberry
Twin Bridges
American
Sugarloaf
Kyburz
Eagle Rock
Bald Mtn.
Pickett Pk.
Stevens Pk.
Red Lake Pk.
Castle Pt.
Alpine
Hay Flat
Buck Pasture

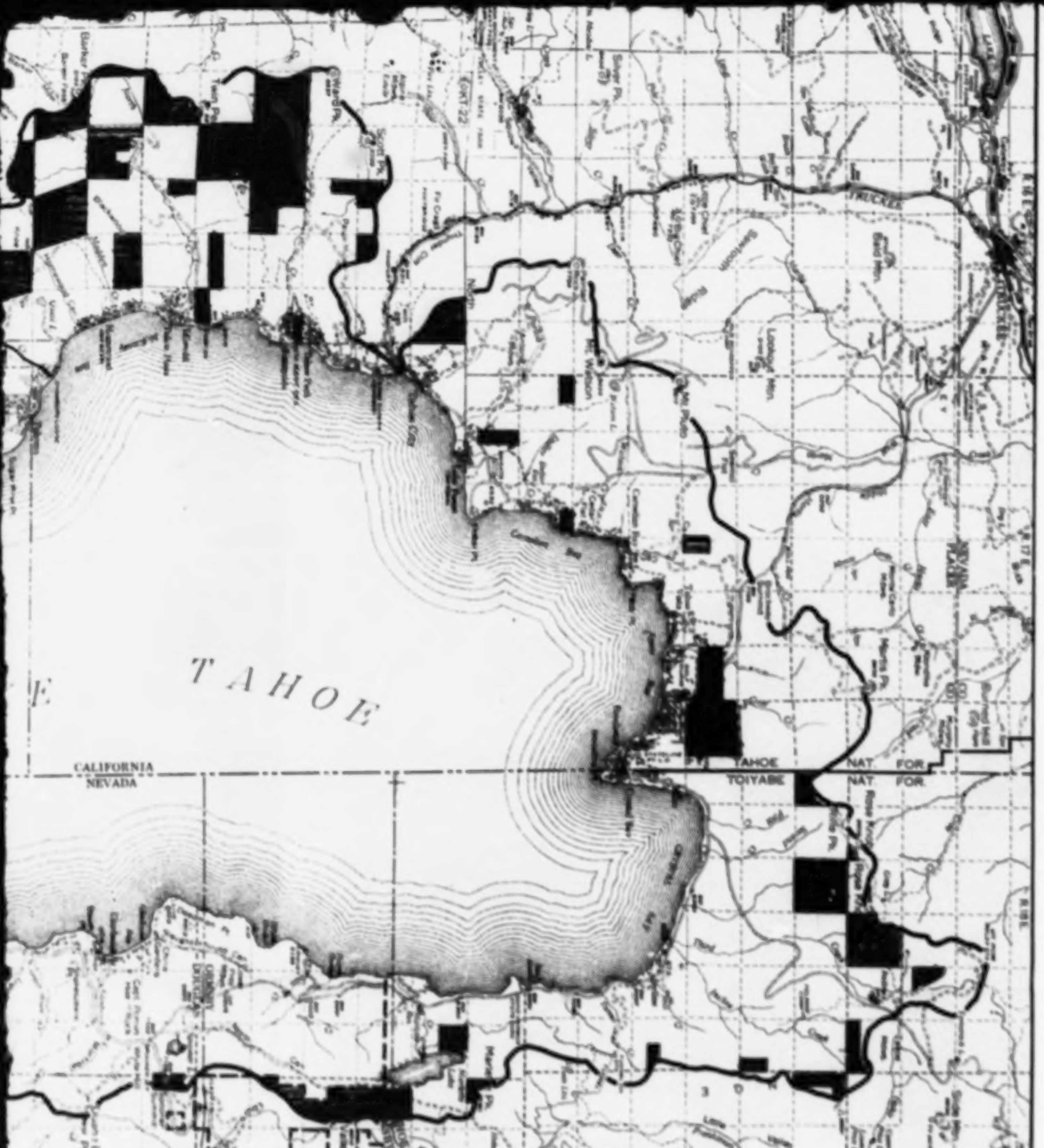

Two Pks.
LOON LAKE RESERVOIR
Broken Mtn.
Guide Pk.
Devils Pk.
TAHOE
ELDORADO
NAT
FOR
Tells Pk.
Silver Pk.
McConnell Pk.
Red Pk.
Lost Corner
Barker Pk.
Twin Pk.
Ward Pk.
Scott Pk.
Squaw Pk.
DESOLATION
VALLEY
Middle Mtn.
Rockbound
Tahoe City
LAKE TAHOE
CALIFORNIA
NEVADA
Castle Rock
South
Cave Rock
White Hill
ORMSBY
DOUGLAS

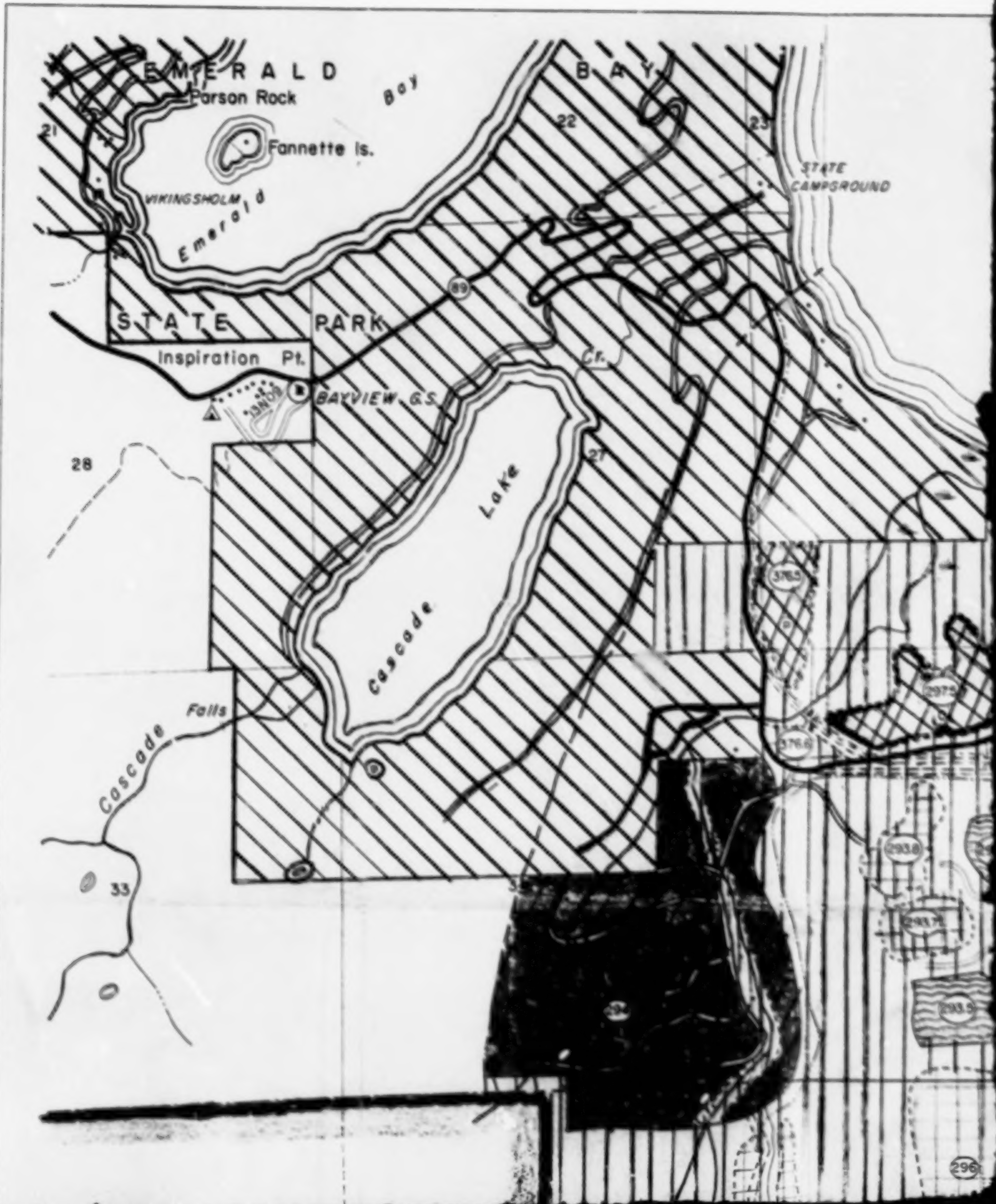

TAHOE
CALIFORNIA
NEVADA
TRUCKEE
TAHOE NAT. FOR.
TOIYABE NAT. FOR.
NEVADA
PLACER
DONNER LAKE
Ward Pk.
Scott Pk.
Twin Pk.
Barker Pk.
Lyon Pk.
Needle Pk.
Granite Chief
Squaw Pk.
Anderson Pk.
Mt. Judah
Donner Pk.
Silver Pk.
Mt. Watson
Mt. Pluto
Lookout Mtn.
Bald Mtn.
Martis Pk.
Burned Hill
Relay Pk.
Rose Knob
Marlette Lake
Marlette Pk.
Spooner Summit
Slide Mtn.
Little Valley
Tahoe City
Carnelian Bay
Crystal Bay
R 15 E
R 16 E
R 17 E
R 18 E

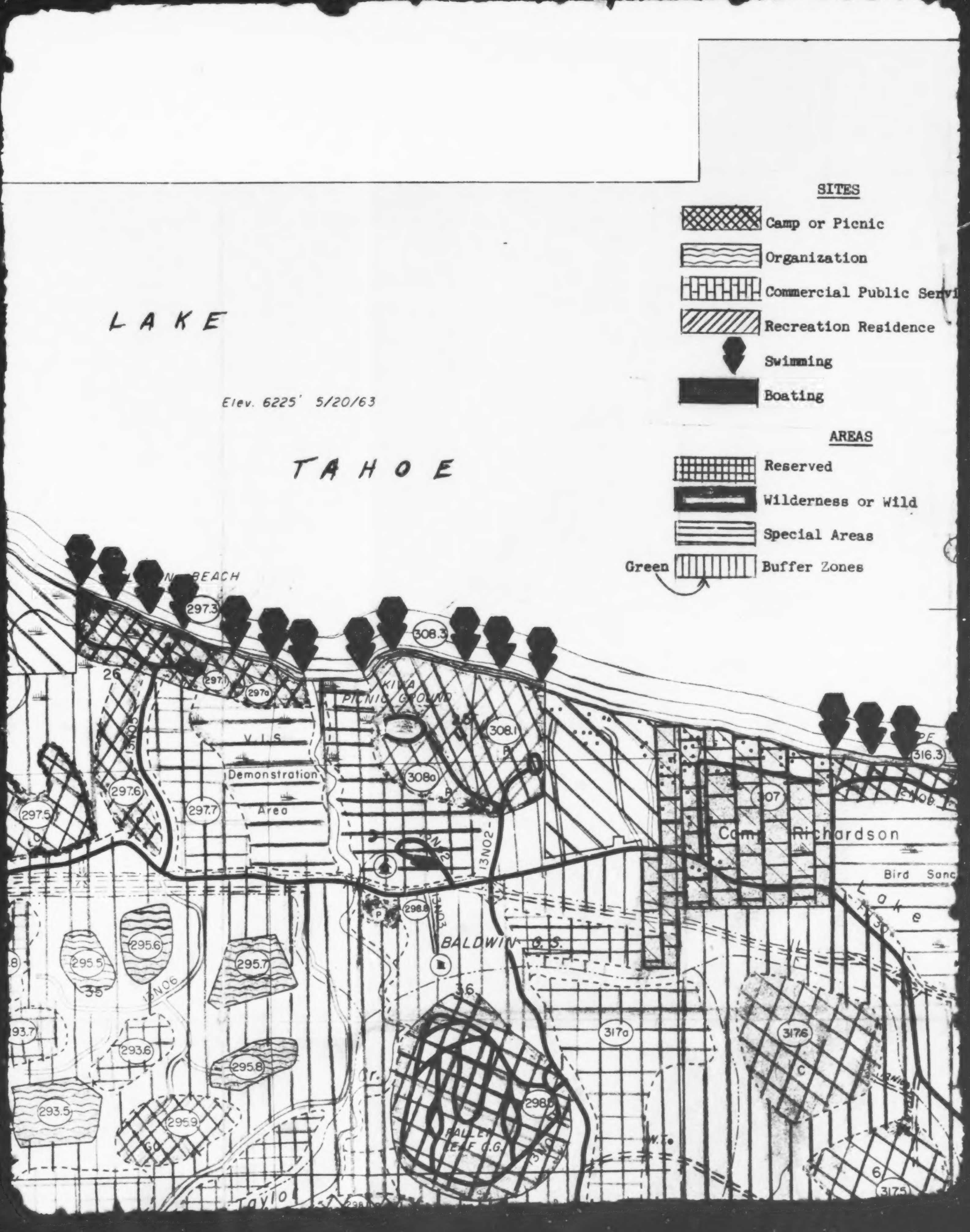

ULTIPLE USE PLAN
KE TAHOE BASIN
SCALE
L E G E N D
FOREST
DS
ZONE NAME
WATER INFLUENCE ZONE
TRAVEL INFLUENCE ZONE
INTERMEDIATE FOREST ZONE
CREST ZONE
SPECIAL ZONE - DESOLATION VALLEY PRIMITIVE AREA
BOUNDARY OF BASIN
McConnell Pk.
VALLEY
Silver Pk.
Lake Red Pk.
Jacks Pk.
Mt. Price
Pyramid Pk.
Blue Mtn.
Chimney Flat
Twin Bridges
AMERICAN
Bald Mtn.
Buck Pasture
Hay Flat
Castle Pt.
Fallen Leaf Lake
Monument Pk.
TOIYABE NAT. FOR.
Jobs Sister
Jobs Pk.
ALPINE
T11N
T10N
T12N
Cary Pk.
Pickett Pk.
Hawkins Pk.
Stevens Pk.
Red Lake Pk.
RIVER



LAKE TAHOE
CALIFORNIA
NEVADA
DESOLATION VALLEY
McConnell Pk.
Middle Mtn.
Lost Corner
Cave Rock
Genoa Pk.
Monument Pk.
FALLEN LEAF LAKE
Tahoe City


TAHOE
CALIFORNIA
NEVADA
TAHOE NAT. FOR.
TOIYABE NAT. FOR.
TRUCKEE


E M E R A L D
B A Y
Parson Rock
Bay
Fannette Is.
VIKINGSHOLM
Emerald
21
22
23
STATE CAMPGROUND
S T A T E
P A R K
89
Inspiration Pt.
BAYVIEW G.S.
13N09
Cr.
27
28
Cascade
Lake
Cascade
Falls
Cascade
33
376.5
376.6
297.5
293.8
293.7
293.9
294
296

SITES
Camp or Picnic
Organization
Commercial Public Servi
Recreation Residence
Swimming
Boating
AREAS
Reserved
Wilderness or Wild
Special Areas
Green
Buffer Zones
LAKE
TAHOE
Elev. 6225' 5/20/63
BEACH
297.3
297.1
297a
26
13N05
297.6
297.5
297.7
V.I.S
Demonstration
Area
KIVA
PICNIC GROUND
308.3
308.1
308a
13N02
13N03
298.8
BALDWIN G.S.
307
Camp Richardson
316.3
Bird Sanc
Lake
295.5
295.6
295.7
35
13N06
293.7
293.6
295.8
293.5
295.9
36
317a
317.6
298.5
FALLEN LEAF C.G.
Taylo
Cr.
W.T.
6
317.5

U.S. Department of Agriculture
Forest Service
California Region

Map to Accompany Plan for

POPE-BALDWIN RECREATION AREA

ELDORADO NATIONAL FOREST

Scale

SITES

- ▩ Camp or Picnic
- ▤ Organization
- ▥ Commercial Public Service
- ▨ Recreation Residence
- ◆ Swimming
- ■ Boating

AREAS

- ▦ Reserved
- ▬ Wilderness or Wild
- ▤ Special Areas
- ▥ Buffer Zones

OTHER

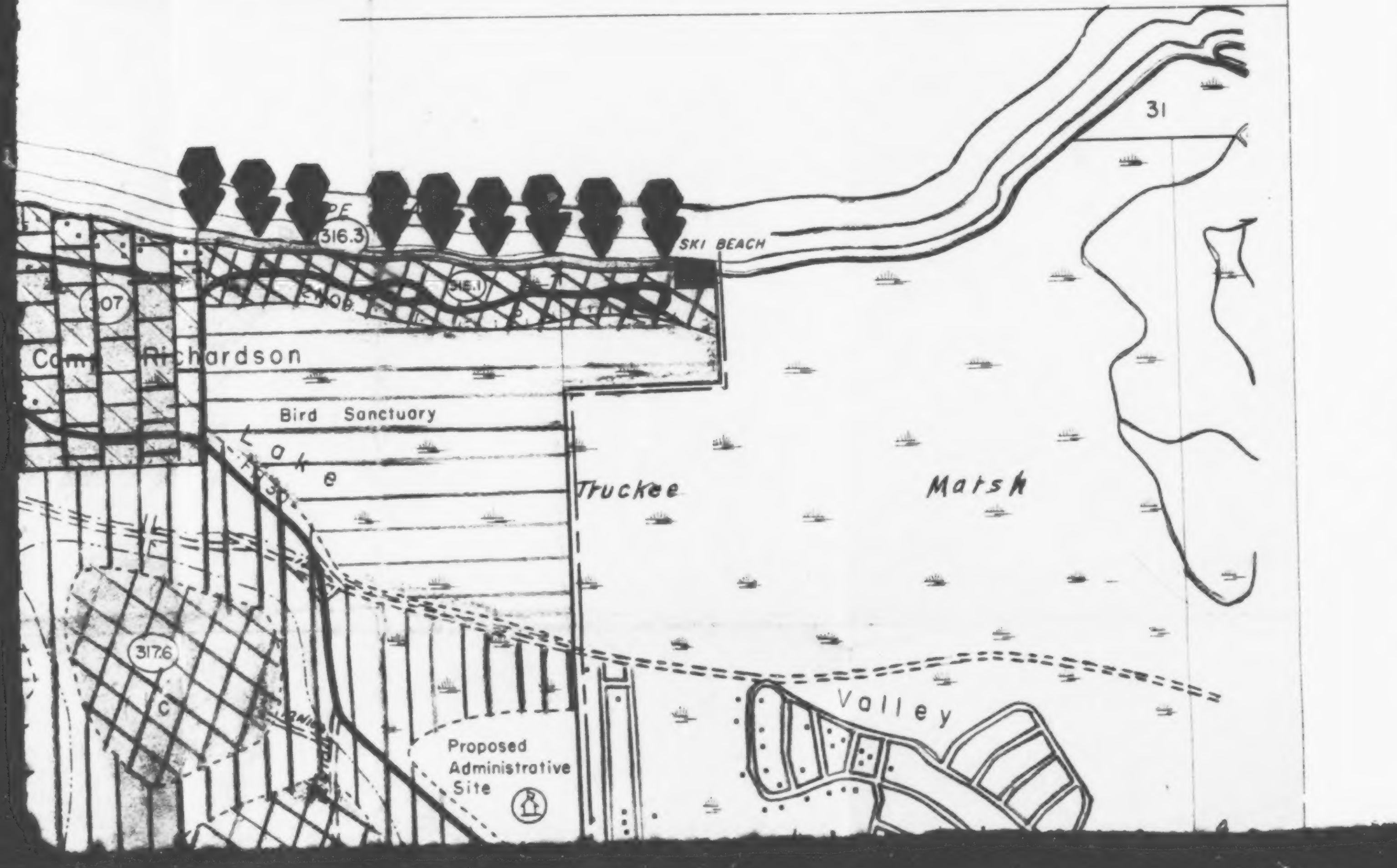
- ▨ Land Not Administered by Forest Service
- (69) N F R S Site Number
- Established Administrative Hdqtrs or V I S Center
- Proposed Administrative Hdqtrs or V I S Center
- ----- Site or Zone Boundary
- —·— Recreation Area Boundary
- ◯ *Existing Sites*

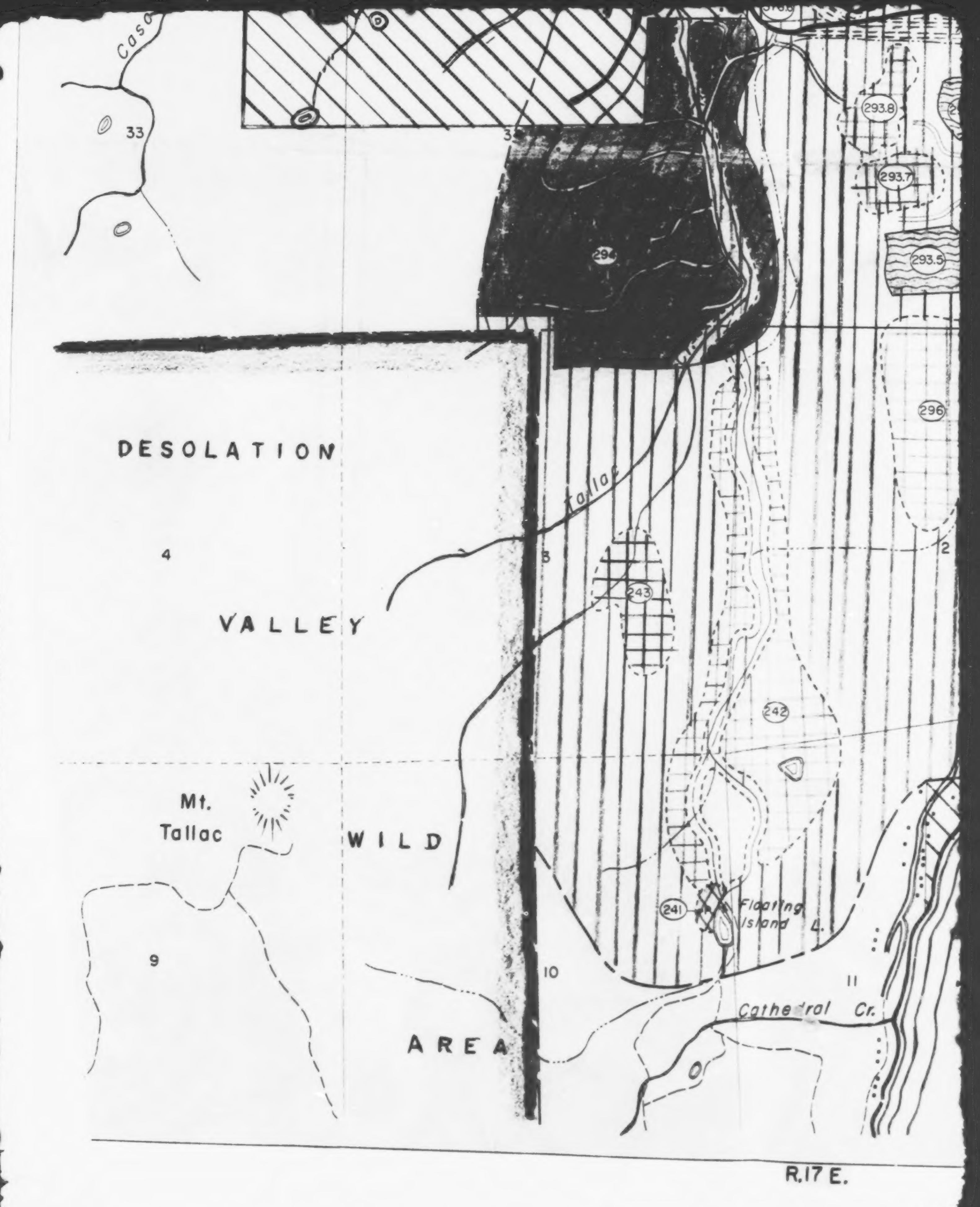
ROADS

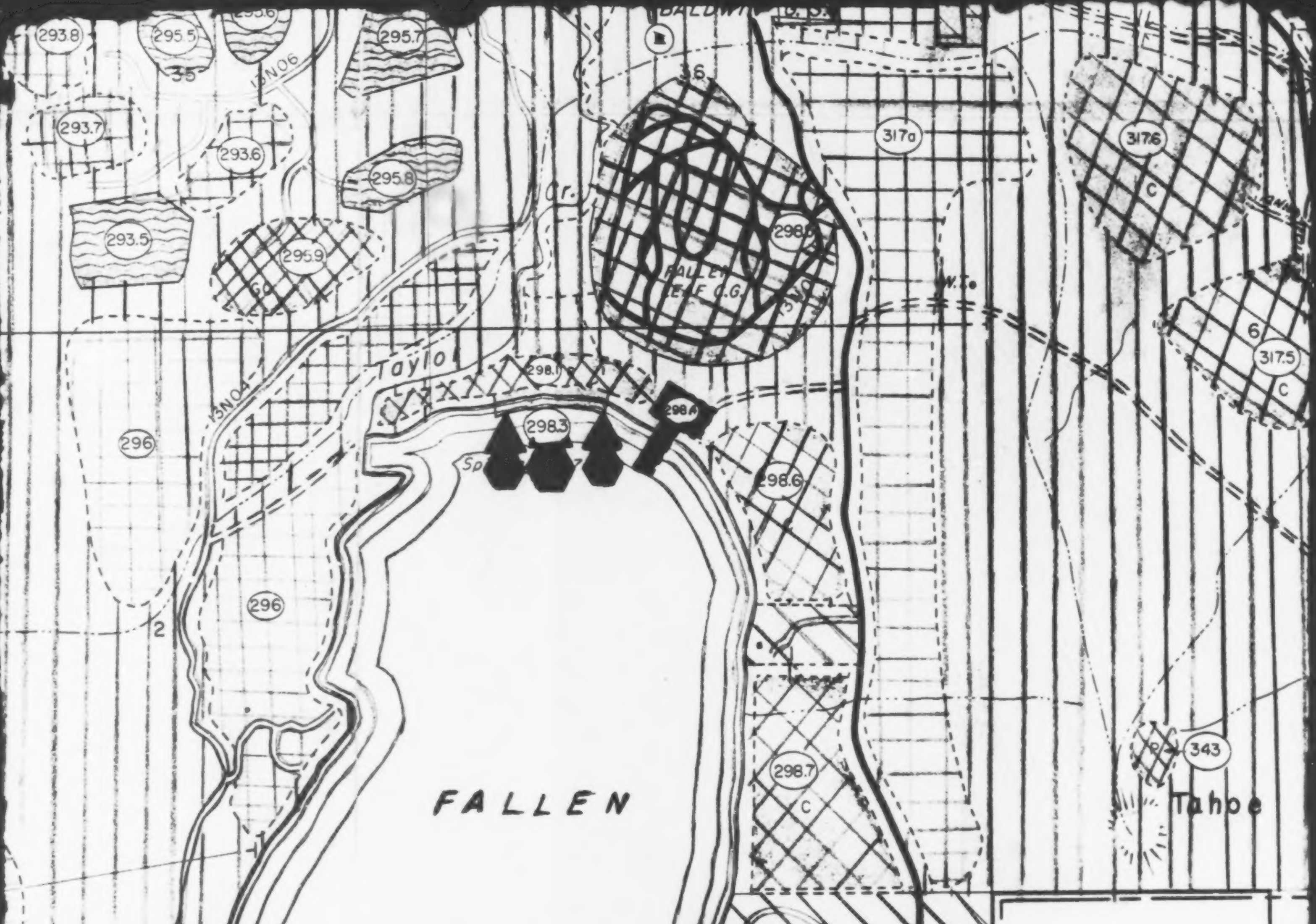
- ━━ Paved
- ═══ Graded and Maintained
- — — — Existing Trail
- Road or Trail to be Eliminated
- ====== Poor Unimproved
- ═ ═ ═ Proposed
- ------- Proposed Trail
- Proposed Bridle Trail
- Proposed Inter-Change
- Proposed Underpass
- —·—· *Proposed Bicycle Path*

Prepared by

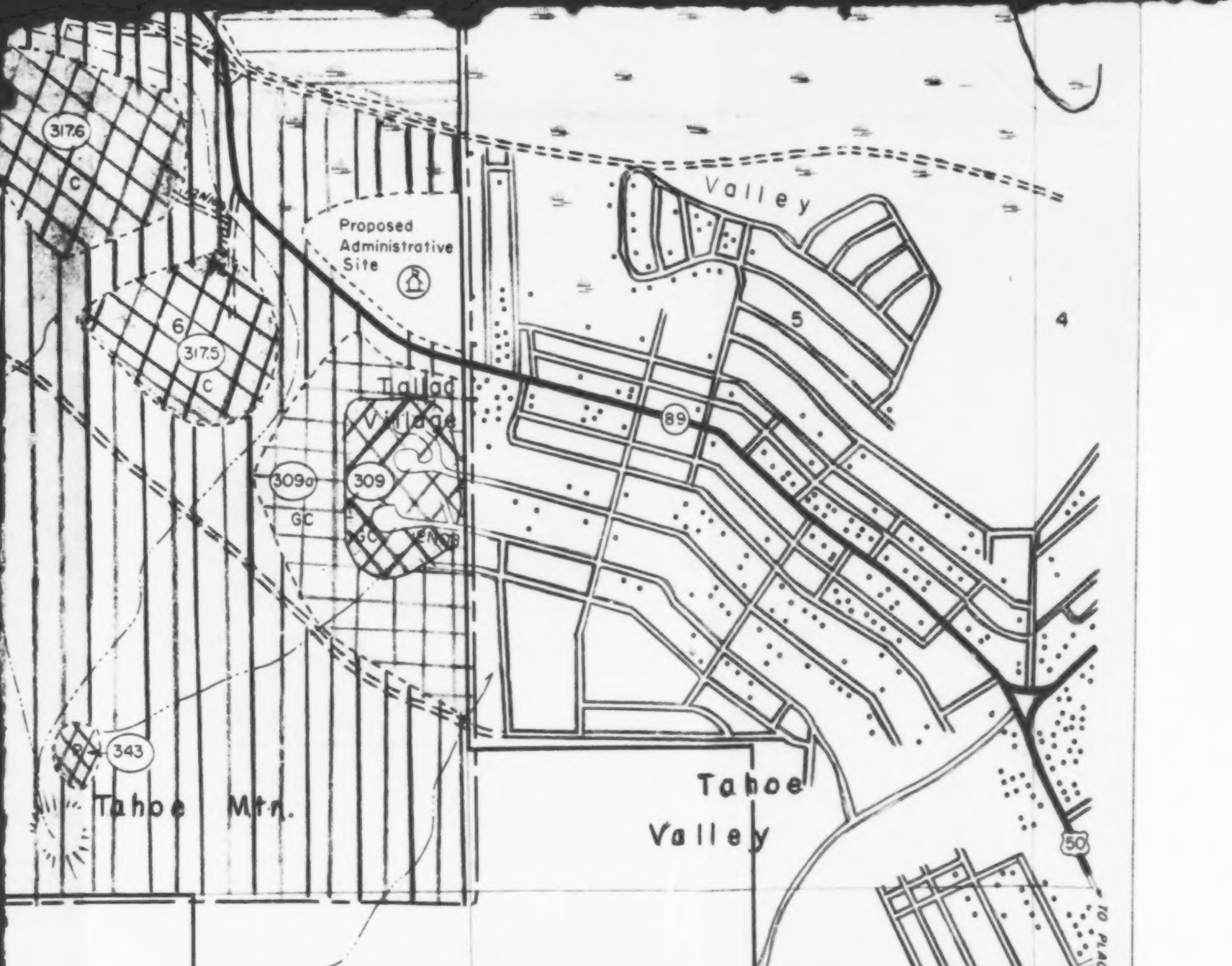
Date


T.13 N.
31
316.3
SKI BEACH
315.1
307
Camp Richardson
Bird Sanctuary
Lake
Truckee
Marsh
Valley
317.6
C
Proposed Administrative Site


Caso
33
293.8
293.7
293.5
294
296
DESOLATION
4
8
Tallac
243
VALLEY
2
242
Mt.
Tallac
WILD
241
Floating
Island L.
9
10
11
Cathedral Cr.
AREA
R.17 E.


293.8
295.5
295.6
295.7
35
13N06
BALDWIN
36
293.7
293.6
295.8
317a
317.6
C
293.5
295.9
Cr.
298.0
FALLEN LEAF C.G.
W.T.
317.5
6
C
Taylo
13N04
298.1
298.3
298.A
Sp
296
298.6
2
296
298.7
C
343
Tahoe
FALLEN
LEAF
LAKE
298a
298a
C
12
11
Cr.
288
7

E.


317.6
C
Proposed
Administrative
Site
6
317.5
C
Tallac
Village
309a
309
GC
GC
Valley
5
4
89
Tahoe
Valley
Tahoe Mtn.
R
343
50
TO PLACERVILLE
7
8
9
T. 12 N.
R. 18 E.

area represents water influence zones. The red, the travel influence zones. These are the two areas in which the Forest Service plans provide for intensive recreational development. The higher elevation lands, the next area, the green area, we term the intermediate forest zones. It's the land primarily of timber cover and only planned for disbursed use.

Moving on up the slope, the yellow color is the crest zone. This is essentially the snow belt and here again why water production, water quality control is primary management objective in recreation development and provides for disbursed use with the exception of winter sports developments.

The one other zone shown on there, the orange color, represents the Desolation Valley primitive area. This is a special area which is under proposal for addition to the National Wilderness System.

The next exhibit on my right there represents an area of intensive recreational development. Development has been started here, but the various colors on that map indicate what is planned in the future to be put in that area. The green area between the variety of colors represents the buffer zone between developments.

The other colors include a visitor center, campground, picnic areas, a boat ramp, swimming beaches, summer homes, organization camps, and some reserved area that is not planned to be developed before the year 2000.

Our development plans for recreational use and for road and trail construction are projected now and await this final implementation clear through the year 2000.

I think perhaps with these remarks I would conclude what I have to say and just ask that perhaps we could continue with questions at this point.

CHAIRMAN STEIN: Thank you. Are there any comments or questions?

MR. FISHER: A couple, Mr. Leisz.

What percentage of the land is held by the Forest Service within the Utility District at the moment?

MR. LEISZ: At the present time?

MR. FISHER: Yes.

MR. LEISZ: There are none of the lands to my knowledge that lie within the Utility District boundary at this time.

MR. FISHER: Do I understand, from your statement, that it is the intention of the Forest Service to join the Utility District for the purpose of exporting sewage from the service available?

MR. LEISZ: That's correct. Wherever this is the most practical method of doing the job. In fact ----

MR. FISHER: Is there any other practical method of doing the job?

MR. LEISZ: In some areas, yes. The higher elevation disbursed recreation areas inside Desolation Valley and the very disbursed campground areas, I don't think this would be at all practical.

MR. FISHER: What method of sewage disposal would occur in those areas?

MR. LEISZ: We use chemical toilets in some of the back country areas. I think in your own terminology here these were referred to as "privies."

MR. FISHER: I notice that your statement says that there are 8,000 persons in your facilities on an average summer day. By that you are talking about campground facilities?

MR. LEISZ: No, I am including more than that. I should be perhaps -- I think I said on peak summer days there would be 8,000. This would include facilities that are on National Forest land that are managed by -- Camp Richardson would be a good example where there is a campground lodge and cabins in such an area and this includes the campgrounds that are managed by the Forest Service.

MR. FISHER: Summer homes and all sorts of things.

MR. LEISZ: Total Federal lands.

MR. FISHER: And none of this is now sewered?

MR. LEISZ: That's correct. It's not sewered to an export system.

MR. FISHER: Is any portion sewered to a Utility District at the moment?

MR. LEISZ: No.

MR. FISHER: I have no further questions.

CHAIRMAN STEIN: Any other comments or questions? Mr. White?

MR. WHITE: What do you do with the garbage from the camps now?

MR. LEISZ: I think we would have to realize that we are talking about the entire Basin, so it varies with the specific area. But in the south end, where most of it is generated, we have it either under contract for certain areas or we haul it to the dump--the county dump at Meyers.

MR. WHITE: This dump is in the Basin?

MR. LEISZ: Yes, it is.

Douglas R. Leisz

MR. WHITE: There would be no obstacles at all to your cooperating on any kind of a garbage system that would supply Basin-wide or area-wide or something of this kind out of the Basin, is there?

MR. LEISZ: No. In fact, Wally, it is my understanding that this is one of the threats to pollution in the Basin and certainly we would want to respond and cooperate in every way to bring this about.

MR. WHITE: Yes. I would say that in our meetings with you people from the Forest Service this has always been the indication, 100 percent cooperation with any plans we develop.

CHAIRMAN STEIN: Any comments?

MR. FISHER: I will just second what Wally said.

There was some question, Mr. Leisz, raised by the Federal report which implied-- but I don't think correctly, and maybe inadvertently -- that logging practices might not be up to snuff.

Now, are there any logging practices in the area, either on Federal or private lands, that do not comply with Forest Service or State regulations in terms of erosion control and retention of silt?

MR. LEISZ: I am reluctant to comment on the private lands because this is a function of the State and I am not in a position to do it because we do not inspect those lands.

From our own standpoint, we believe it is essential and entirely compatible with the uses in the Basin to periodically harvest timber to maintain a healthy, thrifty, timber stand. We think, and are sure, it needs careful doing so that land disturbance is minimized and any exposed areas are stabilized immediately.

MR. FISHER: So, that at least on federally-owned lands there is no question in your mind but what the logging practices are of the highest order and performed in the best practice insofar as forestry is concerned in terms of soil erosion and silt control?

MR. LEISZ: Yes.

CHAIRMAN STEIN: Any other comments? Mr. Schreeder?

MR. SCHREEDER: No comment.

CHAIRMAN STEIN: Thank you very much, Mr. Leisz, for a very informative statement. Mr. Schreeder?

MR. SCHREEDER: I think this concludes the Federal agencies wish to make presentations. We will include in the record a list of the Federal agencies who were contacted. Some of these have submitted a statement for the record. There was considerable discussion concerning the Federal report and the implications of biological growths. At this point, we would like to ask Mr. Mackenthun to take the stand so that the Conferees might ask a question or two.

CHAIRMAN STEIN: Mr. Mackenthun, I think to start this off and get this in perspective -- I know you weren't here yesterday -- probably took as long getting here as some of the early pioneers. I think page 31 might give us as good a summary of the issue as any, although there are references to this point and other points of the report. Page 31, the full paragraph says "At the present time, the waters of Lake Tahoe are not enriched, nor do they support dense algal populations. Threats of future problems are serious, however. The phosphorus concentration in some near-shore areas is now at a critical level for the stimulation of algal growths, and all of the phosphorus present as shown by analytical tests is available for algal utilization.

Available nitrogen concentration is presently low and is believed to be the major nutrient limiting algal development beyond the lake's present capacity. Potentially nuisance-producing bluegreen algae and filamentous green algae are now present in some near-shore areas of the lake. Furthermore, the impact of nutrients from inflowing streams on the lake water was demonstrated by increased phosphorus concentrations and, in some cases, increased algal concentrations. Presently, this impact is limited to the near-shore waters surrounding the stream's mouth."

I wonder if you could comment on that. I think that the question that the Conferees or some of the Conferees had was the validity of the assumption of the causal connection between phosphorus and possibly nitrates and the algal growth in Lake Tahoe or whether the algal growth was more closely related, say, to shallow water.

What are your views on the causal connection between phosphates and algal growth?

MR. MACKENTHUN: Well, I think there is definitely a relationship between the major nutrients, nitrogen and phosphorus and subsequent algal development. It is also true that algal development may originate and may become more severe in the shallow waters of a particular lake. This may be because of two or three factors. One of which is that wind and waves may actually move the algal mass to the shallow embayments or cove areas in the event they do develop outside these particular areas. The literature certainly relates these two major nutrients to algal development in many cases from many experiments including both laboratory and field.

CHAIRMAN STEIN: Well, before we throw this open for questions, do you believe that if we could, by whatever devices we have, keep at least the manmade wastes due to man's activities containing the phosphorus and nitrogen out of the lake, that would materially reduce the algal growth in the lake?

MR. MACKENTHUN: It would materially prevent any increase in the algal growth, certainly.

CHAIRMAN STEIN: Thank you. Are there any comments or questions on that?

MR. FISHER: Yes, I've got a couple of questions.

This report which your signature is on, that was essentially a rewrite to the 1963 Consultants' Report?

MR. MACKENTHUN: This is correct.

MR. FISHER: Have you done any independent work since that time?

MR. MACKENTHUN: On Lake Tahoe?

MR. FISHER: Yes.

MR. MACKENTHUN: I have not.

MR. FISHER: Can you tell me whether or not there have been any significant changes between 1963 and 1966?

MR. MACKENTHUN: I am not aware of any significant changes.

MR. FISHER: You have had a chance to look at the water quality control policy which is adopted by the State of California by the Lahontan Regional Quality Control Board?

MR. MACKENTHUN: Very briefly, yes, I scanned it.

MR. FISHER: Did you find anything to quarrel with in the standards set by the State of California?

MR. MACKENTHUN: No, I don't recall anything specific in this regard.

MR. FISHER: Do you have any standards other than that you would recommend?

MR. MACKENTHUN: Certainly the objectives. I believe they are in that report referred to as objectives for the lake on the nutrients.

MR. FISHER: You have any others to suggest other than those adopted by the State of California?

MR. MACKENTHUN: No, not at the present time.

MR. FISHER: Do you know whether or not any of the standards adopted by the State of California are being violated?

MR. MACKENTHUN: You are using the term "standard."

MR. FISHER: We call it "objectives" and the Federal Government call them "standards." I think we agreed yesterday they are one and the same thing.

CHAIRMAN STEIN: If there were such an agreement, I am not aware of it. I don't believe they are the same things. I don't know how the Commissioner feels about it.

MR. MACKENTHUN: These are the objectives in the report of which you are speaking, is this correct? I don't have a copy of that report before me at the present time.

MR. FISHER: You haven't examined it in detail, then?

MR. MACKENTHUN: Not thoroughly, no, sir.

MR. FISHER: Have you any advice as to what the standards ought to be if they are not those objectives in the adopted policy of the State of California?

MR. MACKENTHUN: No, I don't have anything further to add to that point at this time.

MR. FISHER: I have no further questions.

CHAIRMAN STEIN: Any other comments or questions? Mr. White?

MR. WHITE: Mr. Mackenthun, I understood you to say that there was no new evidence or that you have no evidence with regard to the nutrients or chemical makeup of Lake Tahoe waters other than that from the 1963 report?

MR. MACKENTHUN: I believe there are additional samples that have been collected and have been analyzed. I believe the question was: Was there any significant change?

MR. FISHER: There were two questions.

MR. MACKENTHUN: As I recall those particular data I don't recall any change.

MR. FISHER: One, whether or not you had done any sampling and, second, whether there had been any significant changes?

MR. MACKENTHUN: I have not done any sampling.

MR. WHITE: Have you ever observed the shoreline of Lake Tahoe or the algae in the lake?

MR. MACKENTHUN: Extremely casually.

MR. WHITE: Yes, this actually was my criticism under this particular section. In reading, it looked to me like a textbook reference with regard to phosphate and nitrate. We all recognize there is a relationship between the two. There is a stimulation but observation which is the algae at the lake and this I have seen on many occasions, is adjacent to confinements of water. It is adjacent to the shallow water. There are many facets, many many elements, that result in this and I have yet to see the relationship or even a test showing significantly higher nitrate or phosphate in any of the developed areas.

MR. MACKENTHUN: There could likely be, as you are well aware, several inneracting factors taking place.

For one thing, an algal population or algal cells will take up or use these nutrients in excess of their actual needs. They therefore become collecting basins within their own body for nutrients. They take up sufficient phosphates from the water so that the chemical test on the water itself will show practically no phosphates present but the phosphates that were present are now within the algal mass.

MR. WHITE: No quarrel with it at all. The only point that I was making, as far as I know there is not any relationship that has been determined between phosphates and nitrates along the shoreline where there are developments. The concentrations are in confined waters, and the boat harbors, and I was objecting to the statement as it appeared here.

MR. MACKENTHUN: What particular statement, sir?

MR. WHITE: The one that was read on page 31, sir. The textbook reference to algae and phosphorus.

MR. MACKENTHUN: Well, the higher concentration of algal mass in Lake Tahoe had been found in the shallow water areas that you pointed out and some of the higher phosphate concentrations also at the mouths of the tributary streams.

MR. WHITE: Well, I recognize there are variable phosphates and nitrates about the lake, depending on the natural stream -- and this is also present in the stream without regard to population. There are some of them with no populations on them at all that have fairly high phosphates. I think that maybe I am objecting to shallow water alone or adjacent to these areas and wanting it confined to confined water and confined areas because here is just a continuation of enrichment.

MR. MACKENTHUN: Well, the textbook part of the reference to which you refer, of course, includes the laboratory experiments where phosphates have been added to the test tube and have increased algal production by a tremendous amount, and the work done in Wisconsin in about 1957 indicated that nitrogen, phosphorus and possibly iron were the principal factors.

MR. WHITE: Mr. Mackenthun, you have touched on something we have recognized and wanted to do here for a long time, a eutrophication index.

The Consultant Board applied, you know, for a grant to pursue this very area with Lake Tahoe waters. We believe this is a worthwhile project. We wish you could become interested in this and develop with us a eutrophication index of these waters which I think is necessary.

We have noted the support of the Federal people on this project and I think we could well do this.

CHAIRMAN STEIN: In listening to this, Mr. Mackenthun, I think possibly you and Mr. White may be very close together.

As I understand your view here, you indicate that there is a causal relationship between algal growth and phosphates and the reason you find them in the area is that, as you indicate, it is because they may be blown there by wind or tidal action, etc.

Now, what I think Mr. White is saying, is rather than to decide to use the shallowness, it might be, you'll find a higher concentration in confined areas? Would you accept that?

MR. MACKENTHUN: Yes, that might be a more appropriate term.

CHAIRMAN STEIN: I do think you fellows are so close that there shouldn't be any difference.

MR. QUIGLEY: Mr. Chairman, I would like to comment in the interest of keeping the record straight and following Mr. Fisher's comment on the objectives and/or standards.

Under the Water Quality Act of 1965, the states are given until June 30, 1967, to submit to the Secretary of the Interior suggested water quality standards criteria objectives. The standards are then subject to review. If approved by the Secretary they then become the Federal water quality standards. There is only one comment, Hugo, that I would make to the standards or the objectives submitted by the State of California in the last week or two. This is strictly from a cursory review as I saw them yesterday or the day before for the first time after I got out here. My comment, Hugo, not as a biologist or chemist, which I am not, but as a lawyer, would be this: It would seem to me that if we are going to have a closed agreement over the California standards, to the effect that the California objectives for this Lake Tahoe area will become a Federal standard, there remains the question of how they are going to be implemented.

I will point out that under the Water Quality Act the plan for the implementation and enforcement of the state criteria is to be submitted by the state. It is not intended to be just a paper operation to spell out any set of objectives or a set of biological or other standards. It is inherent and included as part of the requirement as laid out in the law that there must be a plan for their effective implementation.

Now, as I say, this is merely an observation made on the basis of, admittedly, a very cursory review.

It would be my thought, regardless of what we do or fail to do here at the conference, that the standards or objectives, submitted by the State of California, will only have to be reviewed on their own merit; they will have to be reviewed in the light of whatever the State of Nevada submits, because rather objectively you can't have diverse standards for the same lake from the two different States.

This will be the basic job that the Federal Government has in reviewing standards submitted by the states which have an impact on the same river or the same body of water.

MR. FISHER: I recognize that these have not been approved by the Secretary at this point. But I will point out that they are the only standards which have been adopted by any official agency. Since this is an enforcement conference, and since we have a biologist here who has a prepared report, which is the basis of this conference, I am confined to ascertain from him whether he has any other standards in mind other than those that the State of California has adopted; if he has no other standards, whether or not the standards adopted by the State are being violated.

I recognize that the Federal law requires, in due course, review by the Secretary and adoption by the Secretary of the standards with the approval of the State including enforcement procedures.

At this point in time, as far as I know, these are the only standards anybody adopted. I am just trying to find out from this biologist if he has any opinions as a biologist, not as a representative of the Federal Government, but as a biologist, whether these standards are being violated; whether he has any other standards in mind that would be better than those which are adopted by the State of California.

We intend to enforce the standards unless somebody points out that some other standards are more appropriate.

CHAIRMAN STEIN: Mr. White?

MR. WHITE: Yes, this is a two-State operation. Nevada did participate in the hearings. These were developed by a task force from Nevada sitting with California. Whereas Nevada has not gone to hearings in Nevada, they are in the process and we would like to have the comments that are forwarded to California sent to us because we are acting in concert in the adoption of the standards.

CHAIRMAN STEIN: Any further questions or comments? Thank you very much, Mr. Mackenthun.

Does that conclude the Federal presentation, Mr. Schreeder?

MR. SCHREEDER: That concludes the Federal presentation.

MR. FISHER: I would like to call on Harlan Moyer of the South Tahoe Public Utility District. Harlan, would you submit a full statement and give a resume of it.

CHAIRMAN STEIN: Without objection, your full statement will be printed in the record. You do realize all the reproductions of charts, maps, etc., in the record will be in black and white and not in color.

MR. MOYER: That is a shame (Laughter).

MR. FISHER: I notice one of my other witnesses. I will ask Harlan to defer just a moment. I would like to call Senator Teale.

I would like to introduce Doctor and Senator Stephen Teale who represents this District and is co-author of all the bills affecting this new program.

STATEMENT OF THE HONORABLE STEPHEN TEALE, SENATOR, CALIFORNIA

SENATOR TEALE: Thank you, Mr. Fisher. Mr. Secretary and gentlemen of the conference, I apologize that I do not have a written statement prepared. I had other things on my mind this week and had not planned on working.

MR. FISHER: For those who don't know, Senator Teale got married three days ago.

SENATOR TEALE: I speak only on behalf of the California Legislature, gentlemen. And so, I cannot talk to the technical aspects of the problem before you.

We have had a concern for a long period of time in our Legislature about the problems of Lake Tahoe. It is a problem that has crept up on us and exploded because of the national aspect of the recreational area which we have here. We attract far many more people, both on the recreational facilities provided by Nevada, and the national recreational facilities provided by California, than we normally expect. So, this problem of pollution and the overall problem of usage of the area has developed, and our concern over this problem is culminated this year in a series of legislative enactments which we thought at the beginning of the year were impossible of passage.

I would like to review for you very briefly generally what we did. Most important thing which we have done this year has been to enact a bill which makes mandatory hook-up to the sewer system when such a system is available. We have in the Basin, now, a great many so-called dry sewers in which the subdivisions develop sewage systems which lead no place. They simply provide service to that area that will be available when they have the lines to connect to the mains. So, there they sit.

It's also a problem to get people to hook-up when they have septic tanks. Senate Bill 22, simply by legislative enactment, declared that a septic tank is a nuisance when there is sewage service available. We think this is probably the greatest step forward toward implementing the total sewage disposal problem of the lake.

The other things that we have done have been primarily in the area of furnishing some money to aid the local district construction. I would point out to you that the problem is not only one of sewage, but is one of financing. Our area has grown so fast and the problems have become so acute that it is above and beyond the ability of the local taxpayers and even beyond the ability of the State to completely finance. We have made available to these districts a number of loans for the different districts for the north end of the lake and for the south end of the lake and a loan available for construction of the outfall line into Alpine County.

This will go a considerable distance toward solving the problem. However, when we get into the west side of the lake, at the north end, we find a tremendous construction problem and a financial problem that we don't think we can take care of, even by robbing our tidelands oil fund to the maximum which is possible to rig that by one-fourth at this time. I do not know whether the Governor mentioned that aspect of our State finances yesterday or not, but we did dip into a fund that has been reserved for school construction and water construction, and we are going to dip into it for another five years at the rate of about $2 million a year and present the highest priority for that money as the Lake Tahoe area to help in the construction of their sewer problems.

What we need -- and I hesitate to mention it because it is a nasty word -- we need money. We need cooperation from the Federal Government in making available funds above and beyond the P.L. 660 funds which are available; above and beyond the Proverty Programs funds that are available either on a grant basis or a long term loan basis. If we go into a long term loan, it must be truly a long term, because we have committed what we think is our potential taxing ability -- potential financial reserves for approximately 35 years in order to solve an immediate problem which will only become worse as we improve the conditions.

I thank you for the opportunity of speaking with you. I will be happy to answer any questions.

MR. QUIGLEY: Doctor, may I make a comment or two? Direct a question or two?

SENATOR TEALE: Yes.

MR. QUIGLEY: On that latter subject that you hesitated to bring up, the matter of money ---

SENATOR TEALE: Very reluctantly.

MR. QUIGLEY: It's too early to say, of course, but I would point out that the Muskie Bill has already passed the Senate to amend the Federal Water Pollution Control Program to provide for 30 percent grants for the construction of interceptors and sewage treatment plants and would lift the project ceiling. So, that if the bill were to finally become law in the form in which it passed the Senate, communities in this State and in your State and every state will move forward on the assumption of qualifying for the full 30 percent without bumping their head against that inevitable project ceiling, which seems to be a retarding factor.

You know and I know that it takes two to tango. You have to get legislation through the two Houses of the Congress. While the House has completed its Hearings on the measure, it is not yet enacted. It would be presumptious on my part to suggest what the final form is likely to be.

Senator Stephen Teale

I would point out, in addition to the matter of money, there is something that I think ought to be seriously considered here in the Lake Tahoe area, particularly in light of Governor Brown's recommendation yesterday for the need of a Basin-wide agency.

Under the Administration Clean Rivers Restoration project, the bill in the form it passed the Senate -- again we have to wait and see what the House will do -- would make you eligible for 50 percent Federal money of the total cost of your interceptors and sewage treatment if you organize on a Basin-wide approach and qualify. I quickly hasten to add the term "clean rivers" is in some respects unfortunate. It is like Medicare or the right to work law. It actually encompasses a lot of clean rivers. However, it could and would include a basin area such as Lake Tahoe. As I say, it was reported out and passed in the Senate.

In addition, of course, I would point out the bill hasn't passed the House. It substantially increases the amounts of Federal monies that would be available for both construction grants and for research demonstration grants.

Commenting on the point that Wally made earlier, perhaps one of the reasons why the Federal Government has not passed as many worthwhile projects, not only in Lake Tahoe but in other areas, is that we, too, have a limitation that comes from the lack of dollars.

One question, Senator.

SENATOR TEALE: Yes.

MR. QUIGLEY: Senate Bill 22, is that applicable statewide or is that applicable only to the Tahoe Basin on the matter of requiring residents to hook onto the sewage collection system when it is completed?

SENATOR TEALE: I believe it is a statewide application. I would check with Mr. Grader on it. No, that is not true. I point out to you, Mr. Secretary, at the north end of the lake we have legislation that was passed two years ago which makes it possible for the districts to combine in an area disposal sewage export group and we have now under way the formation that we think will form an area agency that will encompass three entire counties. That is the three counties that are within the Basin, El Dorado, Placer and Nevada Counties.

This is to implement the problem of constructing main trunk lines out of the Basin and it is through that agency we hope to get some of this poverty money on a 50 percent basis. No, I guess it is 80 percent.

MR. QUIGLEY: When you talk about poverty money, you are referring to E.D.A.? (Economic Development Administration).

SENATOR TEALE: E.D.A., yes.

CHAIRMAN STEIN: Any other questions or comments?

(No response.)

CHAIRMAN STEIN: Thank you very much. Mr. Fisher?

MR. FISHER: Now, Harlan, can we have you back?

STATEMENT OF HARLAN MOYER, DISTRICT ENGINEER AND ACTING GENERAL MANAGER OF THE SOUTH TAHOE PUBLIC UTILITY DISTRICT, CALIFORNIA

MR. MOYER: Mr. Chairman, Mr. Quigley, Conferees: You have to

Harlan Moyer

excuse me. I think I better introduce myself. I am Harlan Moyer and I am the District Engineer and Acting General Manager for the South Tahoe Public Utility District which is the sewer serving agency here at the south shore of Lake Tahoe. I have filed with you the District statement in regard to this conference. It is relatively short and I shall try to go through and merely hit a few of the high spots in the interest of saving time.

I think it might be interesting to the Federal representatives just to briefly look at the history of this one district here at the south shore of Lake Tahoe which was formed in 1950 and since that time, just a little over 15 short years, has expanded by a factor of 40 in the terms of area and a factor of 50 in the terms of assessed valuation.

Further, this expansion has occurred really in the last 10 years because this District did not provide any type of municipal sewer service until 1956. We think this expansion is an indication of the growth that is yet to come.

The District has since about 1960 sewered the majority of the area that was originally within the District. There was about 125 miles of sewers. We have a modern treatment plant including tertiary treatment that I am sure most of you are familiar with.

I've included as part of the exhibit* the total number of connections and the various types of connections that are made to the system at this time and over a period of years that Nevada has taken and placed. That's at the rear of the exhibit.

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*See Appendix D

I would also comment that in addition to serving the California service area since the formation of the District we have contracted, rather I should say Douglas County Sewer Improvement District No. 1 has contracted with that District for treatment and disposal of sewage. That contract probably will be terminated in 1968 when the Douglas Improvement District will have its own facilities, or the year Douglas County, Nevada, has.

Also attached to the report is a map of our predicted ultimate boundaries. That map is in color and shows the present District boundaries which is the red shaded area. The dark blue boundary within the red shaded areas are the city limits of the newly-born city of South Lake Tahoe. The green areas adjacent are the anticipated relatively immediate annexations to our District and the rather dull tan area to the west of the District boundary is the Pope-Baldwin Recreation area of the United States Forest Service which Mr. Leisz has already pointed out which is proposed for annexation to our District and which we have now initiated a servicing agreement.

We anticipate, according to the various reports that have been made insofar as the Lake Tahoe Basin is concerned, that the South Shore ultimate service area will eventually contain at least 280,000 people. Of course, this is a long ---

MR. QUIGLEY: How many are in it now?

MR. MOYER: Our permanent population within the District is about 15,000, I would estimate. Our summertime population is a little difficult to estimate. I do it by reading the needles of the plant as it goes through. Even that is a little difficult right now but we would judge we were serving about 45,000 -- the equivalent of about 45,000 people at this very point in time, sir. We would serve more and we will be serving quite a few more within another year or two.

I have also included for your information on the Table 2 the actual sewage quantities from the year 1962 through 1965 in terms of million gallons per year average daily flow -- what our maximum monthly flows have been and what our minimum monthly flows have been. You will notice there is a wide variation between the maximum and minimum monthly flows and this is just about opposite, too, in terms of months to what you would expect in normal sewage.

We have our maximum flows during the peak summer period, our minimum during the relatively slow winter period.

The system is completely new. There is a very little infiltration or storm runoff that enters into the system.

Now, I think it's a well-recognized fact by everyone here that our district facilities have been somewhat overloaded in the past two or three years. We don't deny this. We are in a program of planned expansion right now which we would hope would be culminated very shortly. I have given you two or three pages on this program and I will just merely touch on it.

One of the portions of the program that we are very concerned about is expansion of our sewer system through the newly annexed areas.

This will be done, I hope, within another year or year and a half and will serve an additional 5,000 acres of developable and now developed land.

The second major expansion is the Forest Service area that we spoke of.

Third are the plans for expansion from our 2½ million to 7½ million gallons per day. This project is now out for bid. Bids will be received and open on Tuesday, August 9. This expansion includes expansion of the primary, secondary and tertiary treatment plant and it also includes complete provisions for incineration of all sludge --biological and chemical that will be produced by the plant. There will be no longer any sludge disposed of within the Basin by the District.

The other portion of the program and one that has created a moderate amount of interest is the export program to Alpine County. This actually consists of about three separate projects which are described within the testimony in the first one and most important is the Luther Pass pipeline which is out for bid at this time and on which bids will be received on August 8.

It is about 15 miles long and extends from the plant to the summit of Luther Pass. In addition to that we have another pipeline about 12 miles long on which final planning is now in progress.

The project is estimated going to bid about September. This pipeline will carry the treated water down to a point approximately two miles southeast of Woodford's, Alpine County. At that point it is proposed that the effluent will be disposed of into a reservoir which will be a tributary coming into Indian Creek.

The proposed Indian Creek Reservior will have a maximum capacity of 3,225 acre-feet and a surface area of 165 acres. The reservoir will be impounded by a main dam of a height of 63 feet above streambed and a crest length of 1440 feet. Final design is scheduled for completion in January of 1967 and construction is scheduled to start in April and to be completed in October of 1967, assuming the financing and legal requirements have been all satisfied.

We believe that this program will eliminate one of the major sources of potential pollution of Lake Tahoe.

We have already heard quite a bit about money and I have a section in the report entitled, "Financial Considerations." I won't dwell on it too long. I would like to point out to you gentlemen, the representatives of the Federal Government, that the existing facilities that the District has constructed essentially since 1960 represent a total investment of around $11,500,000. It is broken down regarding collection system, pump station, treatment plants and disposal facilities.

Of that $11,500,000 it has practically all been derived from local resident sources either through bond sales or through direct revenues. Our present bond bid is right around $10,000,000. Of that $11,500,000, we have received from Federal grants $320,000. Another $170,000 has been promised but not yet received. We are still hopeful that this will be forthcoming.

Harlan Moyer

The program that I described to you as far as initial construction this year is concerned is going to the treatment plant in Luther Pass and the pipeline will cost about $4,000,000. It is being financed through the local bond funds and a substantial grant order, Public Law 89-136. The Woodfords Pipeline and Disposal area is going to cost around $3,300,000. We predict that that will be financed through a Public Law 660, 84th Congress, grant of some $990,000 and through State grant and loan funds of some $2,300,000.

The proposed Meyers Trunk Sewer System would then provide service into the newly-annexed areas and would cost some $2,000,000 and will be financed entirely by local funds. U. S. Forest Service Trunk Sewer System will cost about $1,700,000. Ultimate development in this area will, of course, be financed in its entirety eventually by the Federal Government, since it will serve Government lands primarily.

In addition to these capital costs, the District plans and budgets are more than $800,000 a year for maintenance and operation costs and this will continue through the 1966-1970 period. This amount, over $100,000 annually, will be spent purely for the cost of pumping the effluent out of the Basin or one-eighth of our total budget is devoted to this.

The future needs of our area, of course, cannot be predicted within a certainty. What happens here depends a great deal on growth patterns that are not now developed and are yet to come but based on what has been done to date and on present-day costs. If we were to develop all lands within our ultimate service area boundary, at today's prices, I would estimate that we would spend some $72,000,000 in the process of bringing sewers to these areas.

The largest expenditure, of course, is for local sewers. This has been in the past paid for by property owners and I assume in the future it will continue to be. We will have a problem, I think, in that anybody will have a problem here at the lake in providing service over a broad area, due to the lack of easily available means of financing basic trunk sewers and pump stations. The type facilities -- that is, whether an area has ten lots, three miles away from the district or whether it is right at the district, this, I think, is going to be a difficult problem to overcome from the financial standpoint. The conclusions that we draw are, first of all, that the District was created only 15 short years ago by a few farsighted local individuals. It was created because of a community need. It was created through community action. It is expanded through local action and through local need. Right now we have a pollution control measure which I think in any other area of the State or Country would be deemed satisfactory, and yet we are faced with an expenditure of a great deal of additional money.

I see Hugo is asking me to get off this, so I will. I will merely make one comment. I think we must stress from a local issue as much Federal help as we can possibly receive in terms of long-term loans and long-term grants, in order to carry out the program as conceived in the report that has been prepared by the Water Pollution Control Administration and is being discussed here.

CHAIRMAN STEIN: Thank you, sir. Are there any comments or questions?

(No response.)

CHAIRMAN STEIN: Thank you.

MR. FISHER: I am then going to ask, with two exceptions, the rest of the statements of the California witnesses to be submitted in writing and the conferees will make it a full part of the record.

I would like Mr. Bruns who is the Chairman of the Alpine County Board of Supervisors to make a brief statement. I will give him about 90 seconds. I would like to have the North Tahoe people agree on who can best present their statement.

CHAIRMAN STEIN: Mr. Bruns?

STATEMENT OF HUBERT BRUNS, CHAIRMAN, BOARD OF SUPERVISORS OF ALPINE COUNTY, FREDERICKBURG, CALIFORNIA

MR. BRUNS: I do have a short statement. Mr. Chairman and members of the Committee: I am Hubert Bruns, Chairman of the Board of Supervisors of Alpine County. I have been asked to express the feeling of the people of Alpine County and the Board of Supervisors toward the importation of sewage effluent from the Tahoe Basin. This is not a popular subject and many people object to it.

Because we realize the extreme need of exporting the effluent from the Lake Basin, we will accept it on the basis of an agreement being worked out between our County and the South Tahoe Public Utility District.

In general this requires that the effluent be piped through the recreation and populated areas, that the pipe be buried wherever possible, and that it be placed within the public highway right-of-way wherever possible. Further, that a reservior be built in Harvey Flat near Diamond

Valley for the purpose of storing the effluent. If these requirements are met there will be no major objection to the project.

In fact as presently planned the project should contribute to the economy of the County rather than detract from it as the original plan of discharging the effluent into Hope Valley would have.

And that's all I have to state at this time.

CHAIRMAN STEIN: Any comments or questions?

(No response.)

CHAIRMAN STEIN: Thank you very much for your statement. I would like to commend you again on the fact that someone outside the area of the watershed recognizes the problem. I believe if we have this interest, we will be able to solve our water pollution control problems. I think it is only this way we can move ahead.

Mr. Fisher?

MR. FISHER: I would like to call Mr. Randolph Dewante.

STATEMENT OF RANDOLPH DEWANTE, DEWANTE AND STOWELL ENGINEERS, SACREMENTO, CALIFORNIA

MR. DEWANTE: I thank you, Mr. Fisher. Mr. Chairman and conferees, I believe you have the statement which we are presenting and in the interest of brevity I am going to just give some of the highlights.

My name is Randolph Dewante of Dewante & Stowell Engineers and we represent the North Tahoe and Tahoe City Public Utility Districts.

Today I am also speaking for the Truckee Sanitary District which is very much involved in our joint project. We feel that we do have a comprehensive program which involves the export of sewage effluent from the Basin and we are ready to proceed.

Randolph Dewante

I would like to ask Bob DeNeary, who is a director of the North Tahoe District, to simply point out a few things on the map as I hurriedly explain the elements of the project.

The basic plan is for an export line, a major trunkline interceptor, which would extend from the North Tahoe Utility District down to Tahoe City. It reverts to the Truckee River and also to the south, extending from the vicinity of Meeks Bay, which would flow generally northerly again to the Truckee River source. Then switching to this other map, this major trunkline would extend down the Truckee River past the community of Truckee, picking up the Truckee Sanitary District, and pumping up to a treatment plant at the vicinity indicated there. The effluent from this plant would then be applied to land disposal in this area. Of course, it would eventually through percolation and filtration reach back into the Truckee River.

Now, just a brief word about this plan. It is a good plan. It has been carefully thought out. It is not necessarily the cheapest because we don't think that money alone is a proper index in this type situation. It has been conceived and it will be designed specifically to protect the downstream Truckee River users and, of course, it is the best plan.

The water right situation is well taken care of because it leaves the water in the right place in the Truckee River. All practicable safeguards would be included in the plan for the protection of the quality of the Truckee River.

Eventually this project would be designed to serve an ultimate population of 220,000.

Randolph Dewante

Now, the map attached to the presentation briefly shows how we propose to implement this project. The first stage would be the line from North Tahoe down to the Truckee River at Tahoe City.

The second stage would be the line down the Truckee River past Truckee City. The third stage would be the treatment plant at Truckee City or below Truckee City and the remaining portion of the interceptor line along the west shore.

I might point out I think a very important feature that this portion of this project has already been constructed or I should say is already under construction and that is a portion of the Truckee line in the vicinity of Truckee. This is being accomplished through a cooperative agreement between the Tahoe City and the North Tahoe Utility District and the Truckee Sanitary District.

This is a joint project and the spirit of cooperation between these agencies is at a very high level at the present time.

I might briefly say what we are presently doing in the way of administration and planning. The North Tahoe District is presently in the process of annexing the area in between their present district boundary down to Dollar Point to link up with the Tahoe City Public Utility District and, as previously mentioned, Truckee Sanitary District is under construction with a portion of the regional plans and also with some of their own facilities.

The Tahoe City Public Utility District has a bond issue that is scheduled for August 16 in the amount of $1 million and is actively promoting this measure at the present time. They are also continuing their very aggressive annexation policy and plan eventually to annex the territory from the source of the Truckee River to Tahoe City on south to Meeks Bay and include eventually all of the west shore probably linking up or meeting the South Tahoe Public Utility District coming from the other direction. Now, just briefly, on the final data, I would like to say a few words.

We in the north area feel that we have completed studies. We have enough studies and we have a good plan and we believe that construction should be initiated immediately. Frankly, gentlemen, our only requirement, as Senator Teale pointed out, is money at this particular time.

I have included in the presentation the schedule that is estimated, of course, based on a five-year program which indicates the final requirements of the three districts involved here to consummate the first phase of this project. I think the important thing that I would like to emphasize here and Mr. Quigley mentioned is the Muskie Bill. Of course, we are well aware of the P.L. 660 program, but 30 percent grant will not be sufficient for the local districts to carry this program. They will definitely need more than this. This is a very large undertaking and it is well beyond the financial capabilities of the local district. You must remember that they have to build the many miles of local lateral sewers and pumping stations. We are talking here only about the trunk lines and the major facilities and we do need substantially greater financial aid than 30 percent. Of course, this is our earnest hope that the Federal Government will be able to assist in this respect.

As Senator Teale mentioned, the State Legislature made available a $2,000,000 loan to the two north area districts.

However, again, let me point out that this is a loan. This has to be paid back. It is not a grant. It is a good loan that is long-termed, low interest, but it does have to be paid back. So, again, I am emphasizing our major problem. Our only problem as far as we know it right now is money. Thank you, gentlemen.

Introduction (Prepared Statement of Randolph Devante follows)

The so-called North Lake Tahoe Area is herein considered to include all of the Lake Tahoe Basin extending from Bliss State Park to the State Line at Crystal Bay, and the Truckee River Basin extending from its source through the community of Truckee. At present there are five agencies providing sewerage service in this area. These are the North Tahoe P.U.D., the Tahoe City P.U.D., the Truckee Sanitary District, the Alpine Meadows County Water District, and the State of California at Squaw Valley. All five agencies have existing collection systems and treatment and disposal facilities, but do not provide service to the entire area. There are still many homes and establishments which have individual septic tank and disposal systems. There are also two other small community systems providing treatment facilities in the area.

The existing sewerage agencies, together with Placer County, have recognized the continuing build-up of sewerage problems in the area with increasing population and development, and have been conducting studies and planning for the solution of these problems for a number of years. It is now felt that a practicable, comprehensive plan for handling the ultimate sewerage problems of the area has been developed. This regional export plan has been officially adopted by the North Tahoe P.U.D., the Tahoe City P.U.D., the Truckee Sanitary District and Placer County, and it only remains to implement this program.

Randolph Dewante

Proposed Regional Plan

The proposed regional sewerage plan for the North Lake Tahoe area consists of a system of collection interceptors, pumping stations, and force mains generally along the west shore of Lake Tahoe which would bring all wastes to the source of the Truckee River at Tahoe City. From this point, an outfall would convey the wastes by gravity along the Truckee River to a point downstream from Truckee, where the wastes would be pumped to a single treatment plant. The outfall along the Truckee River would also receive waste flows from the Donner Lake area and from Alpine Meadows and Squaw Valley. Effluent from the treatment plant would be pumped to land disposal areas above the treatment plant, from which point it would percolate into the ground and eventually return to the Truckee River. The attached drawing depicts the major features of the proposed plan.

The project would be designed to serve an ultimate population of approximately 220,000. Some of the features, such as pumping stations, force mains, treatment facilities, and certain of the gravity trunk lines would be constructed in stages as required. Such stage construction would facilitate financing of the project. The total estimated cost of the first phase (which will actually be constructed in several stages) is $16,500,000, including the Donner Lake interceptor, but excluding any interceptors for Squaw Valley and Alpine Meadows. It is estimated that this first phase will serve the area's needs for at least 15 or 20 years in the future. The second phase of the project will cost an additional $7,000,000, making the total project cost $23,500,000 at today's prices.

Randolph Dewante

Implementation of Project

The attached map also shows how it is proposed to implement the regional plan, and indicates three stages of construction which would constitute the first phase of the project. As the first stage, shown in red, it is planned to construct interceptors, pumping stations, and force mains from Tahoe Vista to Tahoe City from approximately Sunnyside to Tahoe City on the south side of the Truckee River, and a portion of the Truckee River outfall within the Truckee Sanitary District. All of these facilities would be a permanent part of the regional plan. In operation, only that portion of the North Tahoe P.U.D. flow which could not be handled by that district's existing facilities would be transported to Tahoe City for treatment and disposal outside of the lake basin. The total estimated cost of the first stage of the project is $3,500,000.

Obviously, the first stage of the project could not long serve the region's sewerage needs, and wouldn't accomplish the major objective of removing all effluent from the Lake Tahoe basin. Thus, the full consummation of the plan must be attained without delay. As the second logical step in the plan, a gravity trunk line generally parallel to and following the course of the Truckee River, joining the 1st stage segment and extending downstream from Truckee would be constructed, as shown on the attached map. This line could not be utilized to any great extent until the next step is accomplished, but would permit disposing of excess flow by means of land disposal on an interim and emergency basis at a location downstream from Truckee.

An interceptor connecting Donner Lake to the main trunk would also be included. The estimated cost of the second stage is $6,000,000.

In the third stage of the project, a secondary treatment plant would be constructed at the end of the gavity trunk line, as well as facilities to permit final disposal on land in the Dry Lake area east of Martis Valley. Concurrently, the interceptor system, consisting of pumping stations, force mains and trunk lines, would be extended south along the west shore to Meeks Bay, thus completing the first phase of the plan. This third stage is also shown on the enclosed map, and has an estimated total cost of $7,000,000.

It is hoped that the first stage can be initiated immediately, with a continuing construction program until the work is completed. As a matter of fact, the portion of the outfall through Truckee is presently under construction by the Truckee Sanitary District as a joint project with the North Tahoe and Tahoe City P.U.D.'s. Allowing for construction time, it is estimated that the total project would be completed within approximately 5 to 8 years.

While the first stage of the project may be constructed jointly by the North Tahoe and Tahoe City Districts, and by the Truckee Sanitary District, because of the immediate problems, it is anticipated that the remaining stages of the project would be constructed by, and that the completed regional project would be maintained and operated by a regional authority, which would in effect consist of a combination of the various participating agencies. Thus, Alpine Meadows, Squaw Valley, and the three districts could become a part of this authority.

Randolph Dewante

On the other hand, they could also be served under contract with the authority if they chose.

Present Administrative & Financial Planning

The three major existing agencies in the area are now actively planning for project construction and extension of service throughout the area. As already mentioned, one portion of the regional project is under construction, and the Truckee Sanitary District is engaged in constructing local collection lines and interim treatment facilities. It has already approved a bond issue in the amount of $650,000, and is receiving some Federal financial aid under Public Law 660. This District plans further construction projects, including the Donner Lake interceptor system, next year.

The North Tahoe P.U.D. has initiated annexation proceedings for annexing the area between its present boundaries and the Tahoe City P.U D. boundary at Dollar Point. This annexation would add approximately 1940 acres to the present District area of 1080 acres, an increase of 180 percent. It is probable that a bond election will be held this fall and will be in the amount of approximately $1,000,000. Existing treatment and disposal facilities are adequate for present loading and will be retained until regional facilities are available.

The Tahoe City P.U.D. has scheduled a $1,000,000 bond election for August 16, and a citizen's committee is actively promoting the measure. The District is continuing in its agressive annexation policy, which has added almost 5000 acres to the District in the past 2 years, an increase of 700 percent. Present plans call for annexing the entire west shore down to Emerald Bay, and proceedings will be initiated shortly. Existing treatment and disposal facilities will be extended on an interim basis as required, until regional facilities are available.

All three of these districts are actively pursuing matters relating to formation of a Joint Powers Agreement and an area-wide authority to cover the problems involved in constructing and operating the regional project.

Financial Data

The North Shore districts are of the opinion that all studies necessary for selection of the regional plan have been completed, and that construction should be initiated without delay. The only remaining requirement is financial assistance. Because of the tremendous costs of the Regional Plan, such an undertaking is far beyond the financial capabilities of the existing agencies. For example, it is estimated that first phase costs to the North Tahoe and Tahoe City P.U.D.'s which serve the Lake Tahoe area, would be approximately $14,400,000. The present combined uncommitted legal bonding capacity of the two Districts is about $2,300,000.

Of course, the bonding capacity of the Districts will increase as the boundaries are extended to encompass additional areas. However, it must be remembered that the Districts also require a considerable amount of borrowing capacity to fund water system improvements, so that roughly only about half the bonding capacity could be used for sewerage improvements.

It should also be pointed out that the project includes only the facilities required for exportation of the wastes out of the Lake Tahoe Basin. Not included are the many miles of lateral sewers, local lift stations, and other features necessary for a complete sewerage system. The cost of these latter facilities, which will be borne entirely by the local people, will impose a severe financial burden in itself, amounting to approximately 25 percent of the assessed valuation.

It thus can be seen that considerable outside financial help will be required by the districts if they are to complete this ambitious program. The districts are requesting outside assistance for only those funds which are obviously beyond their legal capacity to finance. In addition, property owners will be carrying assessment bonds in the maximum practicable amount that market conditions will bear. On this basis, it is estimated that the agencies will require outside assistance in the amount of about $12,775,000 for the initial project. Of course, this will not be required in any single year, inasmuch as the project will be constructed over a number of years. Following is a tabulation of the estimated amounts of financial assistance required each year over a 5 year program in order to complete the first three stages, constituting the first phase, of the Regional Plan:

Year	Truckee	North Tahoe	Tahoe City	Total
1967	$ 50,000	$ 1,525,000	$ 550,000	$2,125,000
1968	1,045,000	1,000,000	1,200,000	3,245,000
1969	0	755,000	1,400,000	2,155,000
1970	200,000	800,000	1,500,000	2,500,000
1971	200,000	850,000	1,700,000	2,750,000
TOTALS	$1,495,000	$4, 930,000	$6,350,000	$12,775,000

It is estimated that if P.L. 660 funds remain available over the term of the construction program, the three Districts will qualify for about $3,500,000; thus, $9,275,000 of outside assistance will still be needed.

Financial assistance to the North Tahoe and Tahoe City P.U.D.'s in the form of a State loan in the amount of $2,000,000 has been approved by the State Legislature. These funds will be available to the Districts July 1, 1967 provided certain conditions set forth in the legislation providing the funds are met.

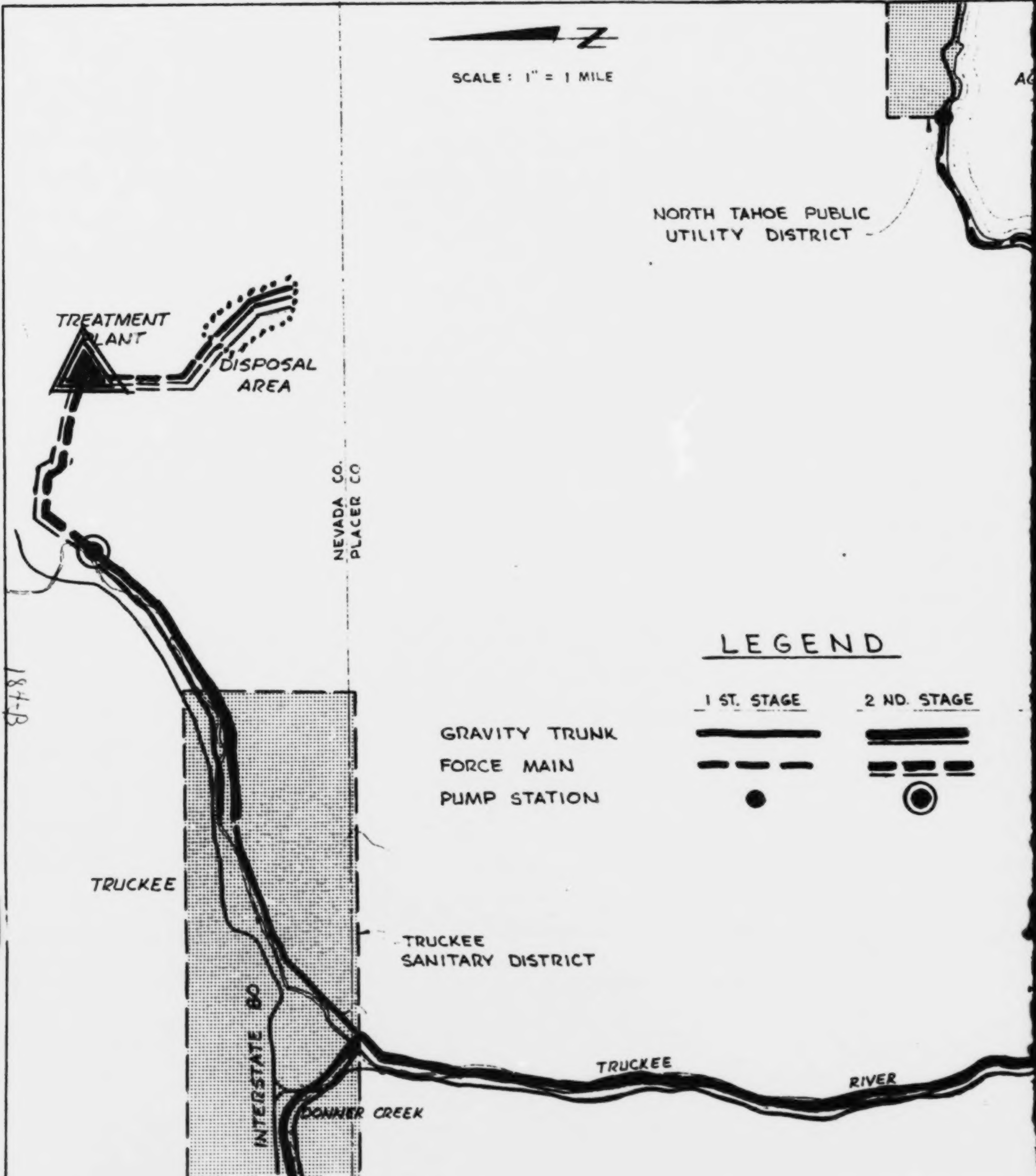
CHAIRMAN STEIN: Thank you.

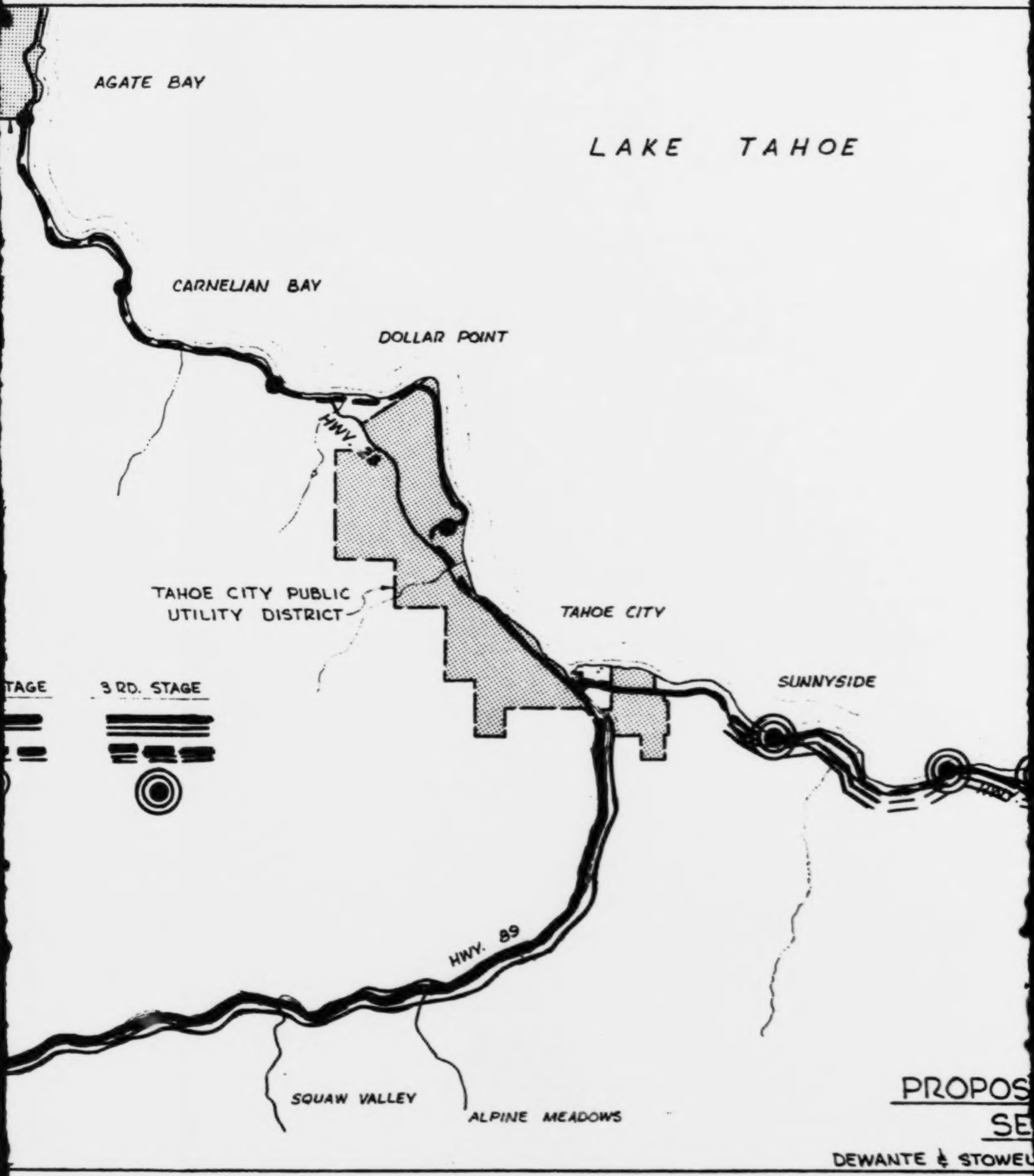
MR. QUIGLEY: May I ask you this: will your overall plans in the Forest Service include a section of the trunk sewers that will have to be built?

MR. DEWANTE: I think that certainly sewer service would be extended to any Forest Service facilities -- perhaps, on a contract basis. That would almost have to be on a contract basis.

MR. QUIGLEY: I was just looking at the estimated cost for these several districts, and I was wondering whether there would be Forest Service lands where 100 percent of the cost of the export line would be absorbed by the Forest Service?

MR. MOYER: I think, if I understand your question, that the Forest Service and even perhaps the Coast Guard section, which is another Federal facility in the area, would certainly participate in the project costs, but presumably only to the extent that their


N
SCALE : 1" = 1 MILE
NORTH TAHOE PUBLIC UTILITY DISTRICT
TREATMENT PLANT
DISPOSAL AREA
NEVADA CO.
PLACER CO.
LEGEND
1 ST. STAGE
2 ND. STAGE
GRAVITY TRUNK
FORCE MAIN
PUMP STATION
TRUCKEE
TRUCKEE SANITARY DISTRICT
INTERSTATE 80
TRUCKEE RIVER
DONNER CREEK


AGATE BAY
LAKE TAHOE
CARNELIAN BAY
DOLLAR POINT
HWY. 28
TAHOE CITY PUBLIC UTILITY DISTRICT
TAHOE CITY
SUNNYSIDE
TAGE
3 RD. STAGE
HWY. 89
SQUAW VALLEY
ALPINE MEADOWS
PROPOS
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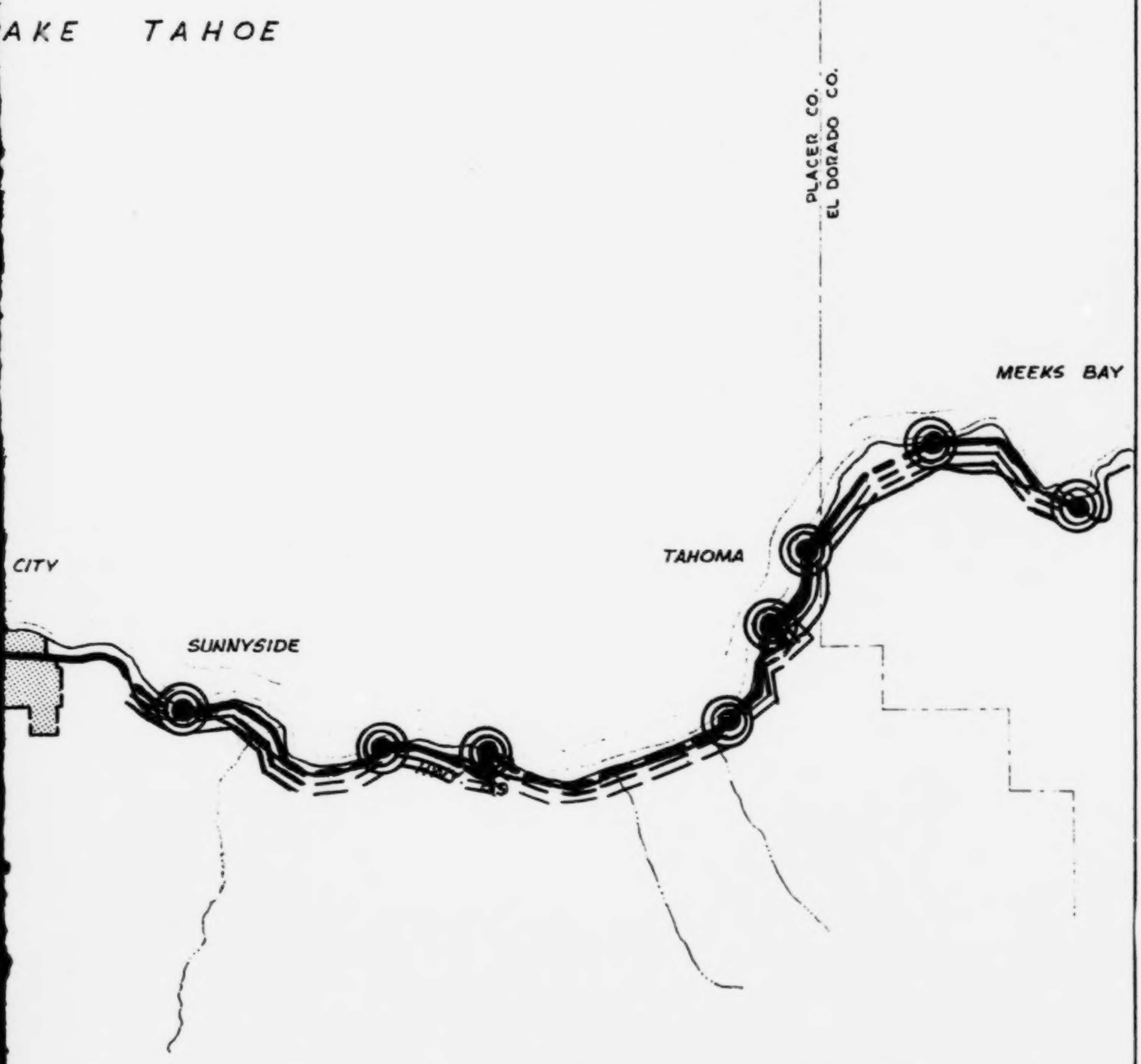
AKE TAHOE
PLACER CO.
EL DORADO CO.
MEEKS BAY
TAHOMA
CITY
SUNNYSIDE

PROPOSED NORTH LAKE TAHOE SEWERAGE PROJECT

DEWANTE & STOWELL

APRIL, 1966

required capacity would justify this.

MR. QUIGLEY: Well, realistically, on the question of money, until the law is passed and the appropriations are forthcoming, to my way of thinking, the only immediate prospect for more than 30 percent money, as far as the Federal Water Pollution Control Administration would be concerned, would be for the area to organize and qualify under the Clean Rivers Restoration Program approach. I outlined previously what the possibilities were. This would, if it could be done, make you eligible for 50 percent money. Certainly, in the face of this, if the bill passes in anything like its present form, you ought to take a hard look and realistically decide to do it. This would be one way of picking up 50 percent of the tab and that would be available within the next year or two.

MR. MOYER: Mr. Quigley, we do plan to form an authority which Senator Teale briefly referred to, which would encompass these three districts which I mentioned. In addition there are other agencies in Squaw Valley and Alpine Meadows which could either be served by contract or join the authority, so this would be a large, single entity, which presumably may be what you are speaking of and may permit the area to qualify under this program.

MR. QUIGLEY: Well, I have no way of knowing. No one does at this stage of the game. We don't know in what final form the law is likely to pass. Certainly, this would be well worth exploring as one of the ways that might possibly solve your money problem.

MR. MOYER: Thank you.

CHAIRMAN STEIN: Any other further comments or questions?

MR. FISHER: Mr. Moyer, it does not appear adequately on the large map or the map which is attached to your statement. You have two trunk lines joining at Tahoe City. You have in cross-hatched legend here the district lands, and I notice right at the place where they join along the lakeshore there's a break space there. Could you tell me why you have that enclave in the middle of the district?

MR. MOYER: This is Bureau of Reclamation land, Department of the Interior land, which I believe is under the control of the Truckee-Carson Irrigation District and has never been included in the district.

MR. FISHER: Have you ever tried to get ----

MR. MOYER: I think I can answer your question, Mr. Fisher, to this extent: The district has in the past attempted to deal with the Bureau of Reclamation and with the Truckee-Carson Irrigation District regarding these lands. To my knowledge, although I can't speak in any great detail because I am not an authority on it, they have not expressed any interest in becoming a part of the district. That is illustrated by, perhaps, annexation. I think they, perhaps, would be interested in sewer service or certainly should be on the contract basis.

CHAIRMAN STEIN: You show your line going across. Do you have any arrangements to run your line across the Bureau of Reclamation land?

MR. MOYER: Actually, Mr. Stein, that trunk line there would be in the State Highway right-of-way that cuts across the property.

CHAIRMAN STEIN: Right. Are there any further questions?

(No response.)

CHAIRMAN STEIN: Thank you very much.

MR. WHITE: I have questions.

Randy, in this map you show some collection lines. Now, at what stage do you provide treatment facilities and where?

MR. DEWANTE: Well, of course, as you know, Wally, all three of the districts involved here presently have treatment facilities. The North Tahoe has a treatment plant for the effluent which does remain in the Lake Tahoe Drainage Basin. Tahoe City has a treatment plant for the effluent which discharges into the Truckee River Basin, as does the Truckee Sanitary District.

Now, these facilities will have to continue in operation through the first stages of this project. It is hoped that the construction of the major proposed treatment facility will get under way either in the second stage or third stage of this project. It is simply a question of how and where and when we can get the necessary funds.

However, as soon as we get the line down the Truckee River, we will be able to take any excess flow from the North Tahoe and Tahoe City Districts down this trunk, utilize it and perhaps use some temporary land disposal facilities downstream from Truckee in a cooperative effort again with the Truckee Sanitary District facilities there.

MR. WHITE: Will these facilities be far back from the shores of the Truckee River itself?

MR. MOYER: Yes, the final disposal area will be well removed from the Truckee River so that the effluent will percolate through an extensive underground formation before it ever returns to the river and, of course, it will be mixed with underground water in the area and diluted.

MR. WHITE: I believe that you used the term "for the protection of the Truckee River." Now, I suppose there are two elements here. One of them is the Alpine Valley and the multitude of small developments with their own treatment facility now disposing to land and leaching into the Truckee River eventually. By collecting these we remove the threat of overflows, breakdowns, and transfer the seepage to another location on the Truckee, is that right?

MR. MOYER: This is exactly what I was aluding to, Wally, that these districts you mention, these agencies along the Truckee River, which now have facilities and as you well know the final disposal is very, very close to the Truckee River and there has been some breakdowns in that respect. This project will enable these discharges to be picked up and, of course, brought to a single large facility which will be much better controlled and capable of a much better operation and maintenance than a multiplicity of small facilities.

MR. WHITE: This treatment plant will be, for all intents and purposes, a two-stage plant, the final plan?

MR. MOYER: Yes, sir, it will be a secondary or a complete stream plant which will incorporate all the latest technological features and, as I say, safeguards to adequately protect the downstream users. For example, a pumping station will be backed up either by emergency storage and/or standby power generation, so that there will not be possible breakdowns.

MR. WHITE: Would you comment on the plant or on the effluent after it leaves the plant -- the safeguards to the Truckee? What kind of insurance is there in case of a breakdown in the filtration process in the beds where the effluent is applied and estimate, if you might, the quality of the water that might reach the river?

MR. MOYER: Well, certainly as far as quality of the water from the standpoint of the normal constituents in waste that you are well familiar with, as measured by the organic loading index, oxygen demand, etc., these will be removed to the highest practicable limits that technology will permit. Of course, they will be adequately disinfected and there will be flexibility and standby units built into the plant so that it will never be necessary, absolutely verboten, to bypass the plant or any appreciable segment of it.

Only relatively small units would have to be taken out of service at any one time. These are some of the safeguards. Certainly, there will be incorporated adequate storage to permit the absorption of any peak loads or any unforeseen circumstances which might occur. As regards to the final disposal, of course, at this point we have a preliminary study. These indicate -- these preliminary studies which are backed up by extensive geological reconnaissance -- that there is a very good situation with regard to groundwater percolation and filtration. I want to emphasize in the design stages of this project these underground materials will be extensively explored and mapped by a subsurface exploration program and we will attempt to find out just exactly the extent of the underground deposits and know exactly what we are doing.

It is, of course, very difficult to estimate what would be the actual effect from an organic load standpoint. I just don't see how that could be hardly noticeable in the Truckee River. I would have to certainly say that I believe there could be picked up some elements of the effluent in the final discharge.

I think that, perhaps, it's hard to remove substances, but, perhaps, just quantitatively. I understand that the Truckee River now has a dissolved solids content of about 60 milligrams per liter (parts per million). I would find it very hard to believe that this proposed project and the resulting discharge could ever, even under ultimate conditions, cause this to perhaps go above 70. This would be just a guess, of course, but I am sure you can recognize this as still very, very low as compared to the water supplies of the typical American communities.

MR. WHITE: I will come to this particular portion of it in a moment. You mentioned "hard to remove substances." By this you mean phosphates and nitrates, this is all?

MR. MOYER: And perhaps chlorides and other dissolved materials.

MR. WHITE: Now, if we have a secondary treated sewage which is in the neighborhood of 15 to 20 parts per million BOD and settleable solids, the only other process we could have to improve this would be filtration.

MR. MOYER: Well, perhaps there are other advantages. We are getting into advanced waste treatment.

MR. WHITE: But this is one of the polishing aspects that we might apply.

MR. MOYER: Certainly.

MR. WHITE: Is the land to which this is to be applied reasonably a filtration in the natural state rather than putting a filter into it?

MR. MOYER: We certainly consider it to be that. Just that, Wally.

MR. WHITE: In this case that you have mentioned a 10 part per million increase in solids in the Truckee River, isn't this in violation of the principles of the Federal Water Quality Control Act?

MR. MOYER: Well, it may be but, I don't know--I can't honestly say that there would be no effect there.

MR. WHITE: This is the kind of thing we are going to have to face up to, if you can make this kind of statement.

MR. MOYER: I think we will. It is now occurring and it certainly is increasing as the Truckee area in Squaw Valley, and Dollar Lake areas build up. Obviously, that is where it is going.

MR. WHITE: In other words, your answer to this is that you have a multitude of small installations now that are doing this. If this would be consolidated to a single installation the increase in one particular location might present a technically legal problem. Is this what you are saying?

MR. MOYER: That is right. I think you have to consider the practicable and available alternatives.

MR. WHITE: Well, now, as far as I know the investigations, actually this plan that you are following here was the preliminary, the recommended plan of Engineering Sciences when we looked at all the processes along the river?

MR. MOYER: Yes, it is. What has been referred to in the Engineering Science Report of 1965 as the so-called Plan B.

MR. WHITE: And the plan stated--I think, it was an unfortunate word here--but for all intents and purposes, you intend to apply this to land.

MR. MOYER: Yes, sir.

MR. WHITE: And you have no evidence at all that you will have a 10 percent increase or any increase? You hope to absorb it on land but possibly there could be some return flow?

MR. MOYER: I do expect there to be some return flow and I think we would be just a little bit in the clouds if we didn't expect some dissolved elements to eventually appear in this effluent.

MR. WHITE: Really, you have no basis for getting a 10 part increase at all?

MR. MOYER: Very much of a guess, Wally.

MR. WHITE: Yes, I have no more questions.

CHAIRMAN STEIN: Any more questions?

(No response.)

CHAIRMAN STEIN: Thank you very much.

MR. MOYER: Thank you.

CHAIRMAN STEIN: In the absence of Mr. Fisher, he had said that Mr. Al Marino has a relatively short statement. Mr. Marino?

STATEMENT OF ALBERT A. MARINO, DIRECTOR OF SANITATION, PLACER COUNTY HEALTH DEPARTMENT, AUBURN, CALIFORNIA

Sewage and garbage disposal practices at Lake Tahoe are in keeping with normal standards for design, and operation and would be acceptable anyplace else in the State and perhaps in the Nation. No problems exist in the common sense of pollution and certainly there is no public health problem. At Lake Tahoe, however, while we have no pollution in the usual sense, these same practices are not satisfactory because of the fact that the lake is of such pristine quality, that the insidious seepage of chemicals and minerals to the lake from the waste that is deposited on land can cause eutrophication and deterioration of the water quality.

The main problem at the lake, which all the counties have been confronted with, is the fact that population increase and development of the land areas has been going on at an ever-increasing rate.

Having recognized the existence of the problem and as a result of this land development, Placer County in many ways has endeavored to reduce the effects on the lake sewage and garbage generated by subdivision development as well as siltation problems, by controlling more firmly the land developments, and even reducing somewhat the amount of development that would take place. The following is an outline of the practices that have been introduced by the Health Department and accepted as policy by the Board of Supervisors:

A. Sewage Disposal

1. As long ago as 1959 the Board of Supervisors at the request of the County Health Officer adopted by resolution a prohibition of any direct discharge of sewage effluents treated or otherwise to any surface waters of the Tahoe watershed, and in fact, of the entire mountain area in Placer County.
2. The County of Placer called a meeting of all five counties ringing the lake in order to have adopted a resolution, which among other things states two main considerations.
    a. That any and all developments within the watershed except in the existing sewer districts, would be

approved on the basis that no more than 2,000 gallons of sewage per acre per day application rate be permitted within the watershed. This was in keeping with the subdivision ordinance which allows approximately 3 homes per acre which again is approximately 2,000 gallons of sewage. It also was a method by which we hoped to slow down development until the exportation plan was a reality.

b. IT ACCEPTED AND PLACER COUNTY HAS IMPLEMENTED THE POLICY THAT ALL BUILDING PERMITS THAT WERE ISSUED ON SEPTIC TANKS WITHIN THE WATERSHED OF LAKE TAHOE WOULD BE OF A TEMPORARY NATURE UNTIL AN EXPORT LINE WAS AVAILABLE TO CONNECT THERETO. EVERY BUILDING PERMIT ISSUED IN PLACER COUNTY SUBSEQUENTLY HAS HAD PRINTED THEREON THE FACT THAT THIS WAS A TEMPORARY APPROVAL FOR SEPTIC TANK AND THAT CONNECTION TO THE MAIN LINE FOR EXPORTATION WHEN AVAILABLE WAS REQUIRED.

3. Any and all subdivisions that have been approved for septic tank sewage disposal or sewer plant treatment and disposal have been approved only after the standard and normal engineering tests have been submitted to this department and been approved. These include percolation tests, soil borings, water table determinations, etc. In

the case of any treatment plants, detail plans must be submitted as to treatment and especially to disposal of the effluent.

4. Upon approval of a subdivision with individual sewage treatment systems, a condition of the tentative map has been that an entity of some type be formed, preferably a county sanitation district which would put the control of the land under the Board of Supervisors as the Board of Directors of the district. We have seven such districts formed at the lake and approximately four more under formation. This enables the county supervisors, as Board of Directors, control of the land until such time as exportation of sewage is available or until a lakewide district is formed. At that time the Board of Supervisors would be able to negotiate for financing and/or contract with any existing districts for service, rather than go through the almost impossible task of getting hundreds of different lot owners to agree to form a district to annex.

5. The county employed Engineering Sciences, Inc., to draw up a feasibility plan for collection and transportation of all sewage effluent out of the watershed. This plan encompassed the area from Kings Beach at State Line to approximately Bliss Park in El Dorado County. The county

has adopted Plan B of the feasibility study and has done all it can to support and direct all efforts toward the consummation of this plan. The county feels that consummation of exportation Plan B will protect not only Lake Tahoe from deterioration, but the Truckee River as well. We feel that the downstream users in this county as well as beyond will be better protected in assuring the preservation of the water quality of the Truckee River.

6. This department, in an effort to control leaching of sewage into drainage easements and then directly to the lake, required impervious drainage ditches and drainage courses through lots in subdivisions.
7. We are attempting to work with the existing sewer districts in Placer County at the lake. These districts are working hard in attempting to handle their increasing flows and in attempting to gain assistance in financing, so that they may consummate Plan B of the exportation plan. The problem of plant and disposal area capacity is becoming more acute and monies must be made available so that the exportation system can be effectuated. In many cases, the question of connecting to an overloaded sewer plant, or approving instead more septic tanks, is coming to a head.

B. Siltation

1. Any and all land-use permits which come before the Planning Commission are recommended by this department for referral

to the Lahontan Water Quality Control Board, if in any way siltation, filling or changing shoreline of the lake is a possibility. The Planning Commission with 100 percent cooperation has placed these conditions on any and all land use permits of this nature that they have approved.

2. To date we have discouraged and have been successful in preventing developments of keys or canals which might cause problems of pollution or algal growth from stagnated water.
3. The county is working towards the adoption of an ordinance and standards to control the construction of breakwaters, piers, retaining walls, fills, etc., on the lakeshore. We are meeting with the various state and county agencies in an attempt to develop proper standards.

C. Garbage

1. The county is securing by lease, or condemnation if necessary, 25 acres of land for a sanitary landfill site outside the watershed. The site is ready to operate, awaiting the final signing of the lease with the parties involved. This will enable Placer County to remove at least half of the solid waste and refuse matter generated in their part of the Tahoe watershed including the Crystal Bay area of Nevada. We plan to secure additional sites out of the watershed to remove all of the solid waste and to phase out the present dumps within the watershed.

In 1963, the Joint Governors Conference on Lake Tahoe gave impetus to this county's concern and efforts to control pollution. At that time the executive officers of the Lahontan Water Quality Control Board was appointed as the Governor's representatives in California on the Tahoe problem, and he has assisted us greatly in our efforts. We have worked very closely with him and the County of Placer is satisfied that the Health Department, the Lahontan Water Quality Control Board and the Governor's representative have functioned well in preventing pollution of the lake. Although nitrogen and phosphorous are a threat in eutrophication processes, pollution in the usual meaning is not yet present, nor have the levels of nitrogen and phosphorous as yet resulted in eutrophication. We are gratified that your report hears this out.

The potential deterioration of water quality which could occur through eutrophication processes until recently has been beyond control. This has been discussed earlier, and the recent adoption by the State and Lahontan Water Quality Control Boards of the Water Quality Control policies, does now give use a set of standards for control of eutrophying nutrients.

In summary, then, the County of Placer has been very concerned and aware of the potential problems of leaching nutrients through the soil to Lake Tahoe from waste disposal, both solid and liquid, since at least 1958. It has endeavored, short of stopping all development, to do all in its power to correct, slow down, and plan for the eventual removal of these nutrients from the watershed. We cannot subscribe to the idea that Tahoe is now polluted, nor can we in any sense state that there is any public health problem generally existent at Lake Tahoe from waste disposal practices. There have been sporadic septic tank failures of public health concern, and we have the laws to control this phase of the problem.

We are concerned with the potential deterioration of the water quality of Tahoe, and feel that the only solution is going to be grants of sizeable funds of money to consummate the plans that are already made and ready to go, to save for the world the beauty of Lake Tahoe.

Thank you for the opportunity to present this report.

CHAIRMAN STEIN: I thank you, Mr. Marino, for a very complete statement. Are there any questions or comments?

MR. FISHER: Just one. Have you had any difficulty with regards to servicing of federally-owned lands in Placer County?

MR. MARINO: Well, that's been probably one of our biggest problems, Mr. Fisher. We have federally-owned lands that have traditionally been leased for development and have been continually asked by private enterprise for lease development. We have tried to get these Federal lands to annex to the Sierra District service. They are in the area and can be served, but this has not been consummated and never been clear to us why the Federal Government, with all its concern about pollution, has not put its own lands within the district so they can be properly sewered.

MR. FISHER: No further questions.

CHAIRMAN STEIN: With whom did you deal, the present people or the Federal people?

MR. MARINO: I don't know why they were. I think the irrigation district that controls the land for the Bureau of Reclamation or Tahoe City.

CHAIRMAN STEIN: Have you ever worked or dealt with the Public Health Service?

MR. MARINO: Yes.

CHAIRMAN STEIN: Do you know that since 1948 we have had a program specifically designed to help control pollution from Federal activities? Have you ever been in touch with us on this problem?

MR. MARINO: I don't know that I have. I believe that the district or the County has been in touch with the Bureau of Reclamation.

CHAIRMAN STEIN: Has been in touch with the Public Health Service?

MR. MARINO: Not that I know of.

CHAIRMAN STEIN: We have the statutory responsibility. Sometimes we can't understand why you people don't come to us. We have had this responsibility since 1948.

MR. MARINO: Well, I don't know how that functioned. If you had the law I don't know why it hasn't been sewered.

CHAIRMAN STEIN: We have the law to help you. You have a problem out here. This is your problem?

MR. MARINO: Be this as it may, the development was there when I came on the scene. There's one area that we have refused development to on septic tanks unless the land did go in. The thing is actually closed as far as any new development going on. I don't know when it went in whether it was before Public Health Service had jurisdiction or not. It was before my time and I can't answer that. I do know it is a problem.

CHAIRMAN STEIN: Any further comments or questions?

MR. WHITE: What is the policy on breakwaters?

MR. MARINO: Wally, right now the thing has been in a state of flux. Right now the only policy that we have incorporated is a fact--that if any breakwaters come in for land use for development, we have asked the Planning Commission to hear all of these before the Planning Commission. Before, it was an automatic permit because the Corps of Engineers apparently felt if they were involved, as long as there was no navigational hazard, it was their only concern. It was the only thing we have been able to do--to ask the Planning Commission to refer all these land permits through our office, through the Pollution Board, so that we can, in turn, get the comments and statements from all the affected agencies and try and incorporate any recommendations and conditions on the land-use permit for a breakwater if it is approved.

In other words, we are trying to get the thinking of all the agencies. If they think it is not a good thing, then we, as a local agency, recommend the denial of the land-use permit.

MR. WHITE: What you are telling me is that if you are going to fill and build a house on it, this is a land-use permit requirement. You oppose this?

MR. MARINO: Right.

MR. WHITE: How about a simple breakwater?

MR. MARINO: I think the same applies for a simple breakwater. The problem we had in the past was, in many times, breakwaters were begun before anybody knew about it.

Now, we have got some control in that we have asked the Placer County building department to put a stop order on any construction to shoreline until it is ascertained they have got a permit through the proper channels. And we wait until we have at least heard the case and all agencies have been able to give us comments and recommendations.

MR. WHITE: Can we anticipate a stop order on this one which is under construction now and which has been for a year-and-a half?

MR. MARINO: I don't know, Wally. I think if someone gave us some recommendations that there was actually a problem going on, we would certainly make an effort to handle it. That permit was issued I believe before we had standards of this nature to try and control it. I couldn't tell you what we might do. We certainly would try if there is a reason for it.

MR. WHITE: Incidentally, I think we might take note here of the problem at Lake Tahoe where I thought we had an understanding among the counties at the lake there was to be no fill at Lake Tahoe. Now, suddenly, we find one and we have these different interpretations. This might point up to one of the things we talked about yesterday--a real need for a basinwide review board of some type. Because if this one is permitted, we just point a finger; and you know as well as I do this happens to us.

MR. MARINO: By the same token, we did just very recently stop a fill off the shore and outside the county without anybody's knowledge. I think this permit was issued on the basis that it wasn't necessarily a fill. He was using native rock from the lake to build this breakwater.

MR. WHITE: What in the world kind of rationalization is this? Does it have to be garbage to be fill?

MR. MARINO: All I know is the standard states: "No foreign material." There is a bone of contention there, too. You take a rock out of the lake and put it someplace else in the lake and not put in any foreign material.

MR. WHITE: I have no argument. We agreed on this, if you rearrange the rocks adjacent to the shoreline. We buy this, but when you are hauling stuff and dumping into the lake, this is fill.

MR. MARINO: I think the original permit, Wally, was based on the contention that it was rock from the lake that was being placed in a different position if I remember.

CHAIRMAN STEIN: Mr. Schreeder.

MR. SCHREEDER: Al, this Bliss Park is a State park isn't it?

MR. MARINO: Yes it is.

MR. SCHREEDER: You haven't had any problems with the California Division of Beaches and Parks in coming to a satisfactory arrangement for anything that the state park people are going to carry?

MR. MARINO: As far as Bliss Park is concerned, that is in El Dorado County. I don't know about it. But in our county we have had very good cooperation with the Forest Service.

MR. SCHREEDER: I am not talking about the Forest Service. Do you have any other State parks in your county?

MR. MARINO: Beaches and parks? Not at the watershed. In Squaw Valley we do. We have State forestry camps.

MR. SCHREEDER: Mr. Fisher, will we hear from somebody from El Dorado County?

MR. FISHER: No. I was trying to have this as the last witness. I have ordered the Department of Parks and Recreation on the north shore of Emerald Bay to join with the North Tahoe complex, as that is put together, and I've ordered them to take the park at the south side of Emerald Bay and join it with the South Tahoe Utilities District.

MR. SCHREEDER: I might make one further comment. The County Health Department seems to be having some difficulties with a Federal agency. I think if the local or state health authorities bring this difficulty to the attention of the Federal Water Pollution Control Administration, we would do what we could to resolve the difficulty. It is a little hard to resolve a difficulty if you haven't been informed of it.

CHAIRMAN STEIN: Any further comments and questions?

MR. FISHER: I want to make one further comment for Mr. Schreeder's advice and education. The state law requires that all state agencies conform to the water quality standards set by the Water Quality Control Board. As far as any departments under my jurisdiction, they will live up to that, at least.

CHAIRMAN STEIN: I think we have comparable provisions in our Federal laws and Executive Orders. Any further comments or questions?

(No response.)

CHAIRMAN STEIN: If not, thank you very much.

MR. MARINO: Thank you.

MR. FISHER: There are several other witnesses for California. I will ask each of you to submit your written statements and, Mr. Chairman, I would like them incorporated in full in the record. If after perusing them; if any of the Conferees have any further questions about them; if they will refer them to me - I will get the answers from the witnesses to any further questions you have by written statements.

STATEMENT OF ALFRED HODDER, MANAGER, TRUCKEE SANITARY DISTRICT, TRUCKEE, CALIFORNIA

MR. HODDER: I am Alfred Hodder, Manager of the Truckee Sanitary District, and I am here representing the Nevada County Board of Supervisors to make a statement in regard to sewage in the Lake Tahoe Basin watershed within Nevada County. This includes about 18 miles of the Truckee River, the Donner Basin, Prosser, Boca and several small streams draining into the Truckee River.

Habitation is predominantly in the Donner-Truckee area which is served by the Truckee Sanitary District. This District's program is part of the presentation of the North Lake Tahoe Regional Export Plan which has already been presented to you. It is important, however, to point out that both the Truckee Sanitary District's program in providing service within the District, as well as the District's participation in the North Lake Tahoe Regional Export

Plan has been reviewed and approved by Nevada County. Nevada County feels that the Truckee Sanitary District is accomplishing a sewage export program from the Donner Basin in an orderly and progressive manner.

Nevada County is preparing an Overall Economic Development Plan with the intention of establishing the Truckee Sanitary District as an eligible recipient of EDA funds. In this OEDP report, the Truckee Sanitary District holds the number one and highest priority position for receiving EDA consideration as established by the County.

Outside the Truckee Sanitary District boundaries, which is essentially the Truckee River two miles east of Truckee to the state line of California-Nevada, there exists no pollution problems. In the Floriston area the County Health Officer states that a very adequate system precludes pollutants reaching the Truckee River. The remainder of the County within the watershed is sparcely populated and is therefore no pollution problem to the Truckee River.

In summary, the Truckee Sanitary District serves the populated area of the watershed within Nevada County, and its present construction program precludes future pollution of the Truckee River. The remainder of the County is controlled by the County Health Officer and is not presently contributing pollutants to the Truckee River, nor is pollution from these areas considered to become a problem in the near future.

Alfred Hodder

Thank you for the opportunity to express Nevada County's position in this regard.

LETTER TO STEWART L. UDALL, SECRETARY OF THE INTERIOR FROM ALVIN LANDIS, ATTORNEY, EL DORADO COUNTY WATER AGENCY

July 15, 1966

The Honorable Stewart L. Udall,
Secretary of the Interior,
Department of the Interior,
Washington 25, D.C.

My dear Mr. Secretary:

Your letter dated June 20, 1966, addressed to Mr. Robert J. Newall, Chairman of the California-Nevada Interstate Compact Commission, declared that on the basis of reports, surveys, or studies, in accordance with Section 10 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 446 et seq.), you were calling a conference in the matter of pollution of the interstate waters of Lake Tahoe and its tributaries (California-Nevada). Subsequently, we were informed that the conference is to be held at Lake Tahoe on July 18 and 19, 1966. The El Dorado County Water Agency has been designated as one of the "persons" to submit a statement to the conference. This letter constitutes the statement of the El Dorado County Water Agency on the subject before the conference and I have been authorized to submit it by the Board of Directors of the Agency.

The El Dorado County Water Agency was created by the Legislature of the State of California as the county agency to develop, control, protect, and conserve the critical water resources of the county. It is essential to the welfare of the people of El Dorado County that future resource development be intelligently planned and that these resources be intelligently utilized to meet ever increasing water needs.

One of the most important of these resources is Lake Tahoe. Approximately 30% of the shoreline of Lake Tahoe and approximately 40% of the area of the Lake Tahoe Basin are within the territorial limits of El Dorado County. The population growth in this area has been dynamic, and studies indicate continued rapid growth. For example, current peak summer population in El Dorado County is estimated at 84,000. By the year 2010, it is expected to reach 325,000 people.

Alvin Landis

Lake Tahoe is considered a water deficient area. In an attempt to avoid conflict and prolonged litigation over water rights, the States of Nevada and California have been negotiating a compact which would equitably allocate the waters of Lake Tahoe, and the Truckee, Carson, and Walker Rivers. Tentative agreement has been reached on an allocation of 34,000 acre feet of Lake Tahoe water to the Lake Tahoe Basin on a gross diversion basis. Of this amount, 23,000 acre feet are allocated to California and 11,000 acre feet to the State of Nevada.

Studies have made it abundantly clear that this allocation is insufficient to meet the water demands of the Lake Tahoe Basin. El Dorado County has recognized that its constantly increasing and expanding recreational and commercial development requires and will require the most efficient utilization of the waters of Lake Tahoe and its tributaries and that an adequate water supply to meet the needs of full development is essential. These objectives are considered vital to the economy and interests of El Dorado County.

The people of El Dorado County have long recognized the danger of degradation of the water quality in Lake Tahoe resulting from present methods of sewage disposal. In a resolution adopted October 19, 1959, the Board of the Agency declared that one of the specific policies concerning the provisions of any proposed compact formulated by the Joint California-Nevada Compact Commission should be:

> "The appropriate public health and water pollution control agencies of the respective states should be granted exclusive and complete authority to determine when the protection of the public health and welfare and the protection of the quality of the waters of the Lake Tahoe Basin require the exportation of waste water and sewage effluent from the Basin."

In a resolution adopted November 4, 1963, the Board again declared in pertinent part as follows:

> "WHEREAS, the maintenance of the clarity of the waters of Lake Tahoe is of primary importance to all those who have witnessed the majestic beauty of this masterpiece of nature; and
>
> "WHEREAS, the export of all sewage effluent from the Lake Tahoe Basin is essential to prevent the inevitable return of sewage impurities to Lake Tahoe, and ultimately impairing the clarity of its waters; and
>
> "WHEREAS, the export of sewage effluent from the Lake Tahoe Basin will require the development of additional water resources to accomplish such export:
>
> "NOW, THEREFORE, IT IS HEREBY RESOLVED by the Directors of the El Dorado County Water Agency that the following policies be adopted with respect to the sewage and water

supply problems of the Lake Tahoe Basin:

> "That sewage effluent should be exported from the Lake Tahoe watershed to prevent pollution of Lake Tahoe;
>
> "That the South Tahoe Public Utility District should accept full responsibility for, and should initiate a comprehensive program to effect, the export of sewage effluent from the lake valley service area embracing that portion of Lake Tahoe adjacent to the south shore of Lake Tahoe which can be logically and economically served by said district.
>
> "That all other agencies engaged in the collection, treatment, and disposition of sewage effluent in the Lake Tahoe Basin should accept full responsibility for, and initiate a comprehensive program to effect, the export of sewage effluent to the end that all sewage effluent is transported from the Lake Tahoe Basin.
>
> "That appropriate state and federal agencies render all necessary assistance to accomplish the objective of total export of sewage effluent from the Lake Tahoe Basin.
>
> "That the El Dorado County Water Agency and all local agencies cooperate in negotiating with state and federal agencies having responsibility for the conservation of water resources to obtain a water supply in sufficient amount to accomplish the total export of sewage effluent from the Lake Tahoe Basin."

It is now well recognized that the beauty and clarity of Lake Tahoe are threatened by the effects of nutrients in sewage discharges from the domestic and commercial real estate developments in the Basin in both States. Sewage discharges contain the nutrients capable of stimulating algae in the Lake. This serious threat to the Lake was highlighted by a joint statement issued by the Governors of the States of California and Nevada on November 11, 1963, which dramatically called attention to this problem.

On November 5, 1963, the Federal Water Pollution Control Advisory Board adopted a resolution urging vigorous protective measures, including export of sewage effluent, to preserve Lake Tahoe from the effects of pollution and the introduction of nutrients derived from sewage which tend to destroy the unique quality of the Lake. These official statements unequivocally express the need to export sewage effluent if the clarity and beauty of Lake Tahoe waters are to be preserved.

Alvin Landis

The Lake Tahoe Water Quality Policy adopted by the Lahontan Regional Water Quality Control Board pursuant to Division 7 of the California Water Code establishes the water quality control standards required by Section 10 of the Federal Water Pollution Control Act. It states:

> "THE PRIME OBJECTIVE OF THIS WATER QUALITY CONTROL POLICY IS TO MAINTAIN THE WATERS OF LAKE TAHOE IN THEIR PRESENT NATURAL STATE OF CRYSTAL CLARITY AND PRISTINE PURITY, AND TO PROTECT ALL BENEFICIAL USES OF THE LAKE WATERS."

The policies include:

> "A - POLICY REGARDING DISPOSAL OF WASTE WATERS OR OTHER DELETERIOUS MATERIAL TO THE SURFACE WATERS OF THE LAKE TAHOE BASIN
>
> > "1. There shall be no disposal of treated or untreated domestic sewage, industrial waste, garbage or other solid wastes, or any other deleterious materials, solid, liquid, or gaseous, to the surface waters of the Lake Tahoe Basin.
>
> "B - POLICY REGARDING LAND DISPOSAL OF WASTE WATERS OR OTHER DELETERIOUS MATERIALS WITHIN THE LAKE TAHOE BASIN
>
> "The Board encourages and will support State Legislation as well as county and local ordinances which would
>
> > "1. prohibit or discourage disposal of treated or untreated domestic sewage, industrial waste, garbage or other solid waste, or any other deleterious material onto or into the lands within the Lake Tahoe Basin,
> >
> > "2. prohibit the use of permeable sewage sludge drying beds within the Lake Tahoe Basin,
> >
> > "3. require or promote the export of all waste waters from the Lake Tahoe Basin,
> >
> > "4. require or promote the export of solid waste material such as garbage and dried or burned sewage sludge from the Lake Tahoe Basin,

> "5. require or promote the planning and development of the Tahoe Basin Sewage Export System (a basin-wide sewerage facility adequate for collection and export of all sewage generated within the Lake Tahoe Basin,
>
> "6. require connection to the Tahoe Basin Sewage Export System by all waste dischargers within the basin,
>
> "7. prohibit connections to the Tahoe Basin Sewage Export System when it appears that further connections will overload the system,
>
> "8. promote the study of waste water treatment methods which could produce an effluent suitable for discharge into the Lake Tahoe Basin without adversely affecting the quality of the waters of the lake."

The foregoing documents conclusively that until there is a scientific breakthrough in the processing of wastes, export of sewage effluent is essential if the objective is to be accomplished.

Attainment of the objective, as well as the enforcement of the standards and policies require evaluation of two relevant and important factors. These are:

1) Whether the provisionally approved Compact between the States of California and Nevada is conducive to such attainment and enforcement, and

2) Whether the allocation of 34,000 acre feet of water to the Lake Tahoe Basin is sufficient.

The El Dorado County Water Agency is of the opinion that both of these questions must be answered in the negative.

With respect to the first factor, the provisionally approved Compact places exportation of waste waters under the exclusive jurisdiction of the Compact Commission. The pertinent provisions are keyed to the protection of the downstream Truckee River water users and the Commission can turn the "spigot" on or off, as the facts with respect to water supply for such downstream users might warrant at the time. It is extremely doubtful if the objective of the protection of the water quality of Lake Tahoe can be achieved in view of these provisions. It may well be that the jurisdiction exercised by the Compact Commission could be in conflict with the requirements of the Federal Water Pollution Control Act and the standards prescribed by the Lahontan Water Pollution Control Board.

Alvin Landis

With respect to the sufficiency of the amount of water allocated to the Lake Tahoe Basin, it should be noted that the Bureau of Reclamation reported in June 1964 in the report entitled: "Lake Tahoe Basin--California-Nevada, A Reconnaissance Appraisal of Ways to Develop a Supplemental Water Supply for the Lake Tahoe Basin," that:

> "If all sewage effluents are exported from the Basin, a maximum supplementary depletable water supply of 24,100 acre feet annually for El Dorado and Placer Counties, or 30,330 acre feet anually for the entire Lake Tahoe Basin, may be required."

Implementation of the policies which are intended to prevent degradation of the water quality in Lake Tahoe raises a clear question of water supply and involves the issue of water rights. In this regard the Federal Government, through the Department of the Interior, plays a most important role. The El Dorado County Water Agency suggests that the key to the accomplishment of the water quality standards and objectives to preserve the wonder and beauty of Lake Tahoe lies in the decisions reached with respect to:

a) the apportionment and use of more than 700,000 acre feet of water stored in Lake Tahoe under rights owned by the United States;

b) the obligations to be assumed by the United States relating to the amount of water to be made available to the entities contracting for a water supply from the Newlands and Washoe projects;

c) the early construction of the Washoe project, particularly Stampede Reservoir;

d) the amount of water to be delivered to Pyramid Lake for the use of the Pyramid Indians under rights claimed by the United States for the benefit of the Pyramid Indians; and

e) the provisions in the Compact now being negotiated by the States of California and Nevada relating to allocations of water and jurisdiction over water quality standards and export of sewage effluent and waste water.

The administration of the Federal Water Pollution Control Act is an effective tool to achieve the objective of maintaining "the waters of Lake Tahoe in their present natural state of crystal clarity and pristine purity, and to protect all beneficial uses of the Lake waters." The decisions reached in all of the foregoing areas should not frustrate the effectiveness of this legislation. The El Dorado County Water Agency urges you and the conference to ground decisions in all areas of responsibility upon adequate limitations of water supply to permit accomplishment of the water quality standards and objectives which would preserve the beauty of Lake Tahoe for ourselves and our posterity.

Respectfully yours,

EL DORADO COUNTY WATER AGENCY

By /s/ Alvin Landis
ALVIN LANDIS, Its Attorney

AL:GM

CHAIRMAN STEIN: Thank you, Mr. Fisher.

Before we start the Nevada presentation and in response to a request from our stenographer, we will take a 10-minute recess.

(Whereupon a 10-minute recess was taken.)

CHAIRMAN STEIN: May we reconvene. Again I have been asked to remind you --will those participating speak rather closely into the mike.

You had something?

MR. FISHER: Yes, I am not sure that I was adequately clear on that last statement about the State parks. There are two current State parks--one on the southerly side of Emerald Bay, which will be annexed to the South Tahoe Public Utility District when facilities are available. There is at present a State park in operation on the north side--D. L. Bliss State Park.

There was an additional State Park, which was bought last December, known as Sugar Pine Point. The new facilities in there will hold all sewage, and all of it will be trucked out of the Basin until such time as the export line is available.

All facilities designed for that are the close type for trucking that material completely out of the Basin. There will be no flush toilets or anything there that will have any other kind of disposal possibilities until the line is available.

CHAIRMAN STEIN: We would like to start, at the present time, with the Nevada presentation. I would like to thank Mr. Wally White for his forebearance. Originally, when we talked about this, we told Mr. White he could have the whole day and be on at 9:00 o'clock. We are almost two and a half hours late in meeting that commitment. We hope we haven't strained his gentlemanly nature to the breaking point.

MR. WHITE: Thank you, Mr. Stein.

My name is Wallace White. I am the Conferee for Nevada. I would like to introduce the officials from Nevada attending the conference.

Mr. Gregory is the Chief of the Bureau of Environmental Health. Stand up, Ernie. Tom Trelease of the Fish & Game Commission; Mr. Hiibel of the Truckee-Carson Irrigation District; Mr. McKissick, Washoe County Commissioner; Mr. Chet Christensen, Mayor of the City of Sparks, and Ken Simpson sitting back there and situated so that the light shades his bald head, but Mr. Simpson of Washoe County; Mr. Manoukian of the Douglas County District Health Department--pardon me, the Sewer Improvement District--and Mr. DeAngelo, Engineer for the district.

I would like to say that I would have a statement which I would suspect as usual is the longest for Nevada, because I do talk too much. Mr. Trelease will have a statement--Mr. Henry, Mr. McKissick and Mr. Wood.

I would have provided a limit of five minutes, but I don't think this is possible. It is a challenge. George Gatter of the League to Save Lake Tahoe is here. The two Districts are meeting upstairs today. This is their regular meeting today. Mr. Manoukian is the Secretary of the District, and this has a certain continuity because of the presentation of the various districts. I would defer now and Mr. Manoukian will make the statement for the Douglas County-Round Hill District.

Mr. Manoukian?

STATEMENT OF MILTON MANOUKIAN, ATTORNEY, DOUGLAS COUNTY SEWER IMPROVEMENT DISTRICT NO. 1

ZEPHYR COVE, NEVADA

MR. MANOUKIAN: I thank you, Wally.

Mr. Chairman, Conferees and distinguished guests:

I appreciate the remarks made by the Chairman.

CHAIRMAN STEIN: Pardon me. Do you have a prepared statement?

MR. MANOUKIAN: Yes, I have yet to cover it. In view of the fact that we are apparently running a little behind schedule, I think we can do a great deal of timesaving by doing one of two things. I understand the South Tahoe Public Utility District has already made their presentation and I will by general reference incorporate some of their remarks.

Secondly, I have prepared a report. I will ask Wally to deliver it to the reporter and he can have the benefit of it.

CHAIRMAN STEIN: Do you want the report to be included in its entirety in the record as if read?

MR. MANOUKIAN: Yes, I would because it has some statistical data.

(The above mentioned report follows Mr. Manoukian's oral presentation

CHAIRMAN STEIN: Without objection this will be done.

MR. MANOUKIAN: As I indicated, the Report of the South Tahoe Public Utility District has already been rendered. Suffice it to say I shall cover what our District has been doing to avoid accruing sanitation problems insofar as that portion of Douglas County located in Tahoe Basin is concerned.

I can tell you this, that dating back to 1953, our District has, by contractual arrangement, twice since amended, been transporting its sewage into the lines of the South Tahoe Public Utility District for treatment and disposal. In short, our District does not at the present time possess or contain within the boundaries of this District any treatment or disposal facilities. We have, instead, some collection interceptor lines. We have since 1953 until the present time, as I said, been transporting to the South Tahoe Public Utility District.

The report heretofore given by the South Tahoe Public Utility District will then suffice insofar as what we have been doing from a technical standpoint.

Our agreement with the South Tahoe Public Utility District expires in November of 1968. The expiration shouldn't really be addressed on that flat-footed a basis, but it did instead provide for alternative methods whereby each entity could make available to the other District the opportunity of participating in the long-range sewage problem.

There's the written report, which I have just filed, and it will indicate we are faced with a good deal of problems some of which we felt were insurmountable. It was determined we could not undertake a bi-state project with a view toward a long-range, permanent solution to the problem.

Milton Manoukian

In August of last year, our District (the Douglas County Sewer Improvement District No. 1), entered into a joint powers agreement with the Round Hill General Improvement District, where each party obligated itself to contract with the other, with the view toward constructing a sewage treatment plant and disposal facilities entirely located in the Lake Tahoe Basin, and more particularly on the Nevada side of the **State** line.

I discussed with Mr. Ware and Lois Larson of the Lake Tahoe Area Council the status of the project being undertaken by the South Tahoe Public Utility District, and I am advised that they are now out to bid and anticipating receiving bids in the next week or two.

I can tell you our District is the only Distict, which is not here telling you what we are anticipating doing. I can, on a flat-footed basis, tell you what we are accomplishing. The report is more in detail and I will touch on it briefly.

Several weeks ago, we awarded a contract for a proposed treatment plant site, reservoir site. We also made provisions for the construction of an access road from Highway 50 to the sewage treatment plant area in the reservoir area. This contract, one in number, has been substantially completed.

On the 7th of this month, we awarded a contract for the construction of two waste water pump stations. Work has commenced on these two projects. Within the next 60 days, we anticipate letting a contract a contract providing for the construction of a $1,800,000 treatment plant.

This is all towards reaching an effective position whereby we will treat the sewage within the Lake Tahoe Basin and export the effluent into the Carson Valley.

I won't go into the technical engineering aspect of this.

Our engineer is advising me that while it is a real tight schedule, we are pretty much on schedule and are anticipating having the entire facility operative by the spring of 1968.

Financially, the matter was handled as follows:

The projects range in cost from between $5,500,000 and $6,000,000. Our District sold or today has taken the final step in the $3,000,000 in general obligation bonds. The Round Hill District has obligated itself to sell its prorata share of approximately $1,500,000, and the balance of the project will be funded by monies available through, where eligible, Public Law 660.

We are not insensitive to the problems experienced by other districts.

In chiding you a few minutes earlier with respect to what we have accomplished, it is not without an insecure feeling of some of the problems which presently confront us. Nonetheless we are committed to undertaking this program and anticipate doing it on schedule and to remind you again then that our treatment plant and disposal facilities will be entirely operative by spring of 1968.

In making a parting shot, and this is election year as I am sure we are all aware and I am surely not campaigning, I would like to tell you in our experience, and apparently unlike that of Mr. Marino, the cooperation which we have received from our own State Health Department and from Mr. Gregory and Mr. White and from the

Federal Water Pollution Control Administration, of Public Health Service, has been 100 percent. We had a little bit of difficulty in acquiring a small piece of property from the United States Forest Service. In the main, where we have demonstrated a concrete and sound proposal, with a view towards a long-range permanent solution and that was discreet under the circumstances, we have been accorded complete cooperation by the various agencies involved.

I have no further comments to make on an oral basis. If any of the members of the Administration would like to propound inquiries either to myself or Mr. DeAngelo, I would be happy to answer them.

CHAIRMAN STEIN: Any comments or questions?

MR. WHITE: Some of you have copies of Mr. Manoukian's statement and I think here we have a little bit of a problem of trying to make an engineer out of an attorney or something of this kind. If you look on page 2--page 3, item 4, I would suggest, with your permission, that you change the 600 M.G.D. to 600,000 gallons a day and in the next line, 750,000 gallons and the rest of them here. You will scare the life out of the exporters if you get involved with this 600,000,000 gallons.

MR. MANOUKIAN: I caught that a few minutes ago. It nearly scared the life out of me, too. Wally is correct.

In dictating -- I would like to blame this all on my secretary, but in good conscience I can't. In dictating this I dictated at 600 million gallons per day and it should be 600,000 gallons per day which is the present flow. We anticipate those flows will be approximately 750,000 gallons per day. Both the treatment plant and the disposal facilities are expandable to take an ultimate of 6,000,000 gallons per day.

CHAIRMAN STEIN: Just for the purpose of clarification of the record, you talk about highly-treated effluent. What are you going to have coming out?

MR. MANOUKIAN: I was afraid somebody was going to ask me that question. Highly-treated effluent I suppose is susceptible of some definition. This, to anticipate you a little bit, is one of the problems we are having. Some of the ranchers down in Carson Valley apparently are imbued with the feeling that we are literally pumping raw sewage down upon them.

This is from a lack of communication, or some very bad communication, between us. It is a highly-treated effluent. It isn't a tertiary process such as the South Tahoe Public Utility District, but it will certainly be an effluent superior in grade and quality to the water which is presently flowing down Daggett Creek.

CHAIRMAN STEIN: Is it secondary treatment?

MR. MANOUKIAN: Yes.

MR. WHITE: The definition in requirements imposed is less than 15 parts per million BOD and settleable solids at time of average flow, with the plant designed with liberal engineering factors throughout. This, of course, with their present capacity of less than a million gallons during the early stages, will be very, very low.

CHAIRMAN STEIN: Would you care to indicate for the purpose of the record what type of secondary treatment?

MR. WHITE: Activated sludge process.

MR. MANOUKIAN: I was recently reminded that it was as dangerous for an attorney to practice engineering as for an engineer to practice as a lawyer. The way I usually answer that question is by reminding the inquiring partywe have been required to satisfy all the health requirements, not only by Wally's office but by all the Federal regulatory agencies.

CHAIRMAN STEIN: Let me say this for the record: When we talk in terms of secondary treatment and activated sludge process, this is generally considered reasonably high treatment and generally the highest type treatment that most American communities provide. Particularly when you chlorinate or disinfect effluent, this is as high a standard of treatment as you can get almost anywhere except in very, very specialized cases.

MR. MANOUKIAN: Thank you.

(Report mentioned on page 219 is made a part of the record and follows)

Before proceeding with an outline of the current program of Douglas County Sewer Improvement District No. 1--hereinafter referred to only as "DISTRICT"--in effecting a long-range solution to the present sewage and sanitation problem at the South Shore of Lake Tahoe, it is important to briefly trace the history of development of the District.

By agreement dated July 21st, 1953, the DISTRICT entered into a written agreement with the South Tahoe Public Utility District--

hereinafter referred to only as "STPUD" -- whereby STPUD would process sewage emanating from within the boundaries of the DISTRICT in amounts not to exceed the contractual limits. The agreement was amended on May 3rd, 1962, to provide for increased capacity rights, and was subsequently amended on May 15th, 1963, to again provide for increased capacity rights by the DISTRICT, and to obligate each entity to make available to the other the opportunity of participating in a long-range permanent solution to the acute sanitation problem confronting the two districts at the South Shore of Lake Tahoe.

For numerous reasons, among them political, the Board of Directors for STPUD, determined that their District could not participate in a bi-state project with DISTRICT as contemplated in the amendment dated May 15th, 1963. Accordingly, DISTRICT did, on August 20th, 1965, enter into a written agreement with the Round Hill General Improvement District -- hereinafter referred to only as "Round Hill" -- Round Hill, Douglas County, Nevada, providing for the joint undertaking for the construction of a sewage treatment plant and disposal facilities entirely located within the State of Nevada in order to meet the sanitation needs of an ever expanding area.

At this point, we can now address ourselves to four major areas of interest in connection with the construction program referred to above.

1. GENERAL DESCRIPTION OF PROJECT -- FINANCING:

The DISTRICT proposes the construction of a sewage treatment plant and disposal facilities having an initial design capacity of 3,000,000 gallons per day (MGD). Both units will be expandable. Sewage will be collected from within the boundaries of DISTRICT and ROUND HILL, and will be treated in the plant which will be located southeast of the boundary of ROUND HILL. The highly treated effluent will be exported from the Lake Tahoe Basin over Daggett Pass, and will be discharged into an unnamed tributary of Daggett Creek, where it will gravity flow to a point of discharge in the Carson River. The cost of the project is estimated to be $6,000,000. Sources of financing are as follows: DISTRICT will contribute approximately $3,000,000 from the sale of its General Obligation Bonds; ROUND HILL will contribute approximately $1,500,000 from the sale of its Special Assessment Bonds. The balance of the project cost, where eligible, will consist of Federal participating monies pursuant to Public Law 660.

2. CONSTRUCTION SCHEDULE: Contract No. 1, providing for the construction of an access road to the reservoir and treatment plant site, has been substantially completed. Contract No. 2, providing for the construction of two waste water pump stations, was awarded on July 7th, 1966,and construction is expected to be completed within ten months from that date. Award of a contract on the sewage treatment plant is expected to be made within the next sixty days. The entire facility is expected to be operative during the spring of 1968.

3. DESIGNATION OF SERVICE AREAS: All properties located within the boundaries of the two districts can be served by sewage lines, which will discharge into the new facilities. By agreement dated September 24th, 1964, and twice amended, ROUND HILL presently is entitled to discharge 100,000 gallons per day capacity into the lines of DISTRICT, for eventual treatment by the STPUD, under the agreements referred to above.

The design of the treatment plant and export facilities contemplates the service of other areas in Douglas County within the Lake Tahoe Basin not presently within the boundaries of either of the two participating Districts, either by annexation or by appropriate contractual arrangements providing for such service.

4. FUTURE REQUIREMENTS: The present combined flow from DISTRICT and ROUND HILL averages approximately 600,000 gallons per day* during the summer months. It is anticipated that the average summer flow in 1968 will be approximately 750,000 gallons per day* and that by 1980 the average summer flow will be 3.0 MGD. At that time the facilities presently under construction can be expanded to accommodate 6 MGD. It is believed that a capacity of 6 MGD will be satisfactory until the year 2000. At this time the DISTRICT does not anticipate that facilities in addition to the basic Daggett Pass project will be required. It is possible, however, that as discharge to Daggett Creek increases it may be necessary to construct

* Report corrected as discussed on pages 223 and 224

pipelines or additional channel improvements along the creek to increase its capacity.

MR. WHITE: I hope to be through by lunchtime. I will attempt to shortcut some of my statements.

STATEMENT OF WALLACE W. WHITE, DIRECTOR, NEVADA DEPARTMENT OF HEALTH AND PUBLIC WELFARE, CARSON CITY, NEVADA

MR. WHITE: My approach to this presentation of the Nevada situation will be to discuss:

Statutes and policy
Wastes and disposal, liquid and solid
Algae
Marinas
Land runoff
Study Committee
Export
Truckee River

CHAIRMAN STEIN: Pardon me, do you have a written statement?

MR. WHITE: Yes, I thought they had been distributed.

CHAIRMAN STEIN: I think the reporter needs a copy.

MR. WHITE: (Continued reading prepared statement)

NEVADA STATUTES:

Nevada statutes are specific for Lake Tahoe. They were adopted in 1949. A permit from the Health Division is required for any construction of a dwelling, a building for human occupancy or commercial purposes, a water or sewer system. Direct discharge of sewage or waste within 100 feet of the high water rim, 6229.1, is prohibited. There is authorization to write rules and regulations to prevent discharge of sewage, wastes, effluents or other offensive materials to Lake Tahoe or the Lake Tahoe watershed. NRS 44.080 - 445.120.

The law is enforced. Subdivisions must reflect this required protection. There is no discharge of any waste to Lake Tahoe.

Lake Tahoe is and has been a water storage reservoir; that elevation 6223-6229.1 is for water storage. Nevada claims all elevations at Lake Tahoe under 6229.1 are public property. Property owners adjacent to the shore line are limited to occupancy of property described in their deeds.

Pertinent rulings and agreements are:

> Truckee River Agreement, 1935, Approved Harold L. Ickes, Secretary of Interior
>
> Truckee River Final Decree, 1936, Approved Homer S. Cummings, Attorney General.

WASTES AND DISPOSAL:

I may skip here because some of this has been covered. Beginning at the north California-Nevada state line:

Crystal Bay has a contract with North Tahoe Public Utility District for 300,000 gpd. The N.T.P.U.D. of California is treating 850,000 gpd and applies effluent to land. The purchase of additional capacity by Nevada has been resisted. Consequently, no new permits have been issued to Nevada applicants in years. Nevada contribution to this sewer is as low as 10,000 gpd and as much as 340,000 gpd. Bills are due July 1st and paid for in cash after a little negotiation.

There are homes on septic tanks, about 15 small lots have been refused permits time after time.

INCLINE VILLAGE:

Population 3,000; sewage produced during summer about 100,000 gallons.

These are large lots. There are septic tanks, new additions, some of these on tanks are being connected to the collection system. This is an aeration treatment process; effluent is discharged to ponds and eventually to the golf course.

Soils here are porous, deep, and an excellent filter. There are monitoring wells. These are dry and no trace of any effluent has been determined. There is not reflection of these additions to adjacent shore waters. There has been an accidental spill to Mill Creek of a few hours duration; there have been faulty septic tank leach fields overflow reaching Mill Creek.

No offshore tests have shown significant nutrient. The discharges from Mill Creek have had coli positives.

The Incline plant has a 1.0 mgd capacity; the permit is limited to a theoretical volume of 0.5 mgd.

Algae was reported in early 1965 along this shore line. This caused investigations, newspaper headlines and everything else. I can tell you we had observations by imported consultants--by representatives of the Public Health Service. At this period of time the lake was rising. The algae did decrease by drowning I suspect. (Laughter) It was not pollution. Actually, we found this same algae in the streambed on the rocks above many sources of habitation. There was turbidity from Mill Creek into the lake. When I make these simple statements, my shoulders have been beaten with this. I don't know how you do it in California, but our newspapers are extremely conscious of these changes in the water. These issues have been battled. They even called my home at night. Investigation showed this along all shore lines; also on rock along the streams draining to Tahoe. When observed, this algae was just above water level. Tahoe was rising, the algae could have been drowned, or died after completing growth cycle. Ingram saw this with me in 1965; it was not pollution significant.

There was turbidity from Mill Creek into the lake. Unprotected road shoulders, changes in the stream, an industrial operation was responsible. These items were corrected, or are in the process of correction. Last week there was turbidity; there were also high winds. The turbidity came from shore line erosion and picking up previously -- even 2 or 3 years ago -- deposited hillside wash. Creek beds and road drainage channels are to be protected.

All garbage is hauled from Incline.

Just south of Incline is a small pioneer development on septic tanks. For two years a spring flowed opalescent water. Now, when you get to Lake Tahoe and get a water that is a little colored, you are in trouble. This has probably cost us thousands of dollars to try to find out what it was. We haven't the slightest idea. There's no difference in any chemical. It's simply slightly colored. We don't know the cause or origin. I am sure I could write a story of it. No physical tests were significant. We don't know the cause, origin, or remedy.

From here southward to the Ormsby-Douglas County line is undeveloped. This will become, we hope, a State park. There are a few houses on septic tanks. Sand Harbor is here. This is served by chemical toilets, with hauling of wastes.

GLENBROOK:

Glenbrook is one of the oldest developments on the lake. This is on septic tanks. The development is much smaller now than in early 1900. This is the most difficult of our communities to sewer. An occasional permit is issued for a home on a large lot to be served by septic tank.

CAVE ROCK:

Cave Rock is an older development on small lots and septic tanks. Eventually this could be sewered as extension of the Round Hill-Douglas No. 1 system. There is very limited development here.

There is a boat ramp here. This was built by the State. Maintenance is faulty. Better management is indicated. Without any sewer contribution of any kind, no housing drainage or other source of sewage, this water for years after the shore line fill continued to be high in coli. There was more boating, possibly just activity, change in current produced this. Don't be too anxious to jump to conclusions as to coil source; this one did not have development nor housing--just clean rocks and people.

Wallace White

There are scattered developments to the existing Round Hill-Douglas districts. These are all septic tanks. Skyland is substantial -- all on large lots. Possibly here, soils are not yet nutrient saturated because shore lines are clean.

Round Hill in November 1963 had a permit for a 15,000 gpd development. This soil was so tight,subsurface disposal was not possible. At this time Round Hill has a capacity purchased from previously allocated volumes of Douglas No. 1.

Douglas No. 1 is all on sewer, collected and disposed to South Tahoe Public Utility District. They have a purchased capacity of 1.0 mgd; were in June producing 480,380 gpd.

Following Governor Sawyer's and Brown's program announcement of November 1963, these districts had allocated and sold 1,425,000 gallons capacity. The resistance to permits by the Health Department and cooperation of the District Board has resulted in reducing these total allocations to 0.79 mg. Kahle has returned 97,925; Harrah 250,000 gallons. Dell Webbs' Tahoe-Sahara had a permit in June of 1963 for 240,000 gallons; this cost $217,136. You see, the cost of sewage disposal is high, roughly $1/gallon of sewage, and treatment sometimes goes to $1,000/1 mg.

These two districts have tried to work with S.T.P.U.D. to join them in a treatment plant in Nevada and in California. These efforts failed, although Nevada welcomes joining with California now in an export facility. The plan is for the Nevada districts to construct a 3.0 mgd activated sludge plant, liberally designed to produce an effluent of 15 ppm BOD and SS at this loading, assuming this would be under 15 ppm until plant capacity is reached. This to be stored in a 50 mg reservoir, then pumped to Daggett Creek. The site is acquired, plans are ready, financing available. Some work has been done and contracts should be let this winter. The plant is designed to be expanded as needed.

MARINAS AND FILLS:

There were 3 marinas constructed adjacent to Incline shores in 1964 and 1965. These were without permit, on land not owned by builders; that is, this is into Lake Tahoe below 6229.1 level. This is fill with rock.

The policy of Nevada is there shall be no fill to Lake Tahoe. Permits have been denied for large fills from proposed road building this year and last year. At least one fill was ordered removed. Permits to Department of the Army are being coordinated through Governor Sawyer's office.

Legislation on boats, house boats, marinas, piers are indicated.

On at least two occasions observations have been made of shore lines. There was no conclusive evidence that on-shore developments resulted in increased algae concentrations. There are very definite increases in algae along Lake Tahoe shores when water is confined in marinas, and this is not related to nutrient from shore, simply confining water. There is increase in algae and BOD in shallower water opposite Eldorado Beach and at Tahoe City.

These are not necessarily associated with nutrients, but with shallow water. In the water-shortage year of (1947 ?) the algae was so heavy off Eldorado Beach traffic was difficult. There was a California publication on this, and this was before the time of the developments on the shores.

There simply is not evidence conclusive enough to associate algae with increased nutrients at Lake Tahoe. Now, here I think I should very plainly state that theoretically this is so. We could duplicate it, but it is not happening at the present time. Monitoring at Lake Tahoe is new. Enough figures aren't available to make a decision on anything.

STUDY COMMITTEE:

Since 1966 there has been a two-State effort at determining the problems and possible answers to problems at Lake Tahoe. This is a nine-member board.. Meetings are of two days duration every month. By now we believe we know something of Tahoe and Tahoe problems. All agencies and governments have appeared, probably excepting Federal Water Pollution Control. We have considered sewerage a State and local problem.

TRUCKEE RIVER:

The Truckee historically has had pollution from upstream logging, stables, hog pens. There was an industrial waste of sulfite. At this time the Truckee is in better condition than ever before. Present Reno-Sparks discharges are unsatisfactory. By winter a new 20 mgd joint Reno-Sparks plant will be constructed and operating. When this goes into operation the BOD to the Truckee which then flows to Lahonton will have a 6500# per day load. The Truckee readily absorbs this and recovery under greater loadings than this is complete at the Sierra Pacific Power Plant.

The Truckee must be protected and any BOD or contamination upstream of Reno and Sparks will be resisted.

Nevada does not oppose, and in fact has assisted with development of the California north rim sewer. This is in the interest of Nevada in that this interceptor sewer line and treatment system include the many small developments upstream that from future system projections are expected to be greater. This system would protect the Truckee if export is to land away from the river.

EXPORT:

The export from the South Basin in Nevada to Daggett Creek can only be approved if no new problem results. This can be as much as 500 lbs. of BOD daily from a new plant. The discharges to the Carson are being reduced. The discharge to Daggett Creek is not significant and should not result in damage of any kind. Not even traces of polluting substances are anticipated in Daggett Creek. There will be nutrients, but less than at present. The discharge to the Carson would be to an area already carrying some BOD from farm lands and return flow.

CHAIRMAN STEIN: Are there any comments or questions:

MR. FISHER: I will comment that it was a very good statement.

CHAIRMAN STEIN: Mr. Schreeder?

(No response)

CHAIRMAN STEIN: I would like to join with Mr. Fisher; as usual, it is an excellent statement from Wally White, as we have been accustomed to getting over the years. Of course, Mr. White puts his finger on all the tender spots of pollution control that we have throughout the country.

I am sure that many of us who have been in the Federal Government for a long time share those observations.

You made a statement about coliform. Luckily, this isn't a problem in the lake that we are concerned with here. But in other areas we are. In the Great Lakes we are not sure and some of those beaches have had high coliform counts. When we finally get all the sewage treated and taken away, we are not going to have the coliforms at the beaches. I think, from what you have indicated here, it is just another aspect of the other side of the coin. But we certainly do appreciate that statement.

MR. WHITE: Murray, if you would like--I said I would finish "before lunch," and it is five to. You might get in one more. Or if you wish, I could, with Mr. Hiibel's permission, give a statement for him. I guess the only reason is this, he says I can read faster and I would have his statement typed. It is in longhand. He is from the Lahontan District. How about our recessing and getting the rest of this this afternoon.

CHAIRMAN STEIN: How long do you think you will be?

MR. WHITE: I would think maybe an hour on our side.

CHAIRMAN STEIN: Sometimes we tend to be a little short. Do you think you want to give yourself enough time to call your shots and come back at half past 1:00, so you have time to organize?

MR. WHITE: We are organized, sir. We have been waiting for a long time.

CHAIRMAN STEIN: Do you want to come back at 1:15?

MR. WHITE: Let's come back at quarter after 1:00.

(Whereupon the Conference recessed for lunch.)

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Tuesday, July 19, 1966

Afternoon Session

CHAIRMAN STEIN: May we reconvene. Will everyone please be seated? We will continue with the presentation as scheduled. It is 1:15. We will proceed with the Nevada presentations.

Mr. White?

MR. WHITE: The first presentation at this reconvening of this morning's Conference will be by Tom Trelease of the Nevada Fish and Game Commission. Incidentally, following Tom, will be you, Chet, and then Dave.

STATEMENT OF THOMAS J. TRELEASE, CHIEF OF FISHERIES
NEVADA FISH AND GAME COMMISSION, RENO, NEVADA

MR. TRELEASE: Thank you, Wally. Chairman Stein, ladies and gentlemen:

My name is Thomas Trelease, Chief of Fisheries for the Nevada Fish and Game Commission.

Gentlemen:

The Nevada Fish and Game Commission appreciates this opportunity to again lend our support in behalf of the fishing public to help in the protection of Lake Tahoe against the evils of pollution.

In the early days when white man first settled in the Tahoe Basin, Lake Tahoe supported an abundant supply of cutthroat trout, which was more than adequate to supply the needs that existed at that time. Subsequently, this population of trout died out. No one is really sure of the exact reason or reasons for their disappearance, but it has been suggested that their loss was due to some type of disease or the introduction of mackinaw trout, or interference with their spawning runs. In any event, that population of native trout was lost and has since been replaced with mackinaw and rainbow trout. Today, the demands for fishing are so much greater than they were in those days that the existing population of trout is unable to adequately supply the demand.

Since 1954 the Nevada Fish and Game Commission has been carrying out research and management on Lake Tahoe in an endeavor to improve the quality of fishing in Tahoe. We have been joined by the State of California, in this endeavor. Because of the large size of Lake Tahoe and its highly aesthetic environment it would be an ideal place to have a top quality fishery.

As the population in the Tahoe Basin continues to grow, greater and greater demands for good fishing will be placed upon the Fish and Game Departments of Nevada and California. Thus, we are extremely interested in doing all we can to improve the fishing in the lake and to prevent anything which would adversely affect its existing or potential fishery.

To this end we worked with, and supported, the Task Force which was established by the Lahontan Regional Water Quality Control Board of the State of California, to draft water quality standards which we felt would properly safeguard the fishlife and fishery habitat of Lake Tahoe.

Problems we see developing today such as the effects of land use, which result in severe erosion problems, with its resulting pollutants in the form of silts and turbidity, are a forewarning that correction is already needed and prevention is a necessity. Each year our department receives increasing numbers of pollution complaints, primarily in connection with those easily seen factors such as turbidity. The construction of piers and breakwaters almost invariably result in complaints where turbid water is created in connection with their construction. Land fills have created even more concern. Future problems may involve run-off through city drains which sometimes carry gasolines, oils and other forms of foreign materials from accidental spills. With the wide use of insecticides, many of which are extremely toxic to fishlife, run-off from lawns and landscaped areas may also create problems unless proper preventive measures are taken.

The water quality standards which have been drafted and are being considered for adoption at Lake Tahoe will give enforcement agencies the tools with which to minimize pollution problems. Each agency of both states has by law certain areas of responsibility in connection with their various activities. Our law which stipulates that any person who places or allows to pass, or who places where it can pass into or upon any of the waters of the State, any substance that is deleterious to fish shall be guilty of a misdemeanor, makes it mandatory that our agency be alert to and take action against any such violations.

Our personnel who are doing research, fishery management, and law enforcement are frequently patrolling the lake. They have been instructed to watch for instances of water pollution and to report them immediately.

The water quality standards that are being considered for Tahoe, reflect the attitude of the majority of the inhabitants of the Tahoe Basin, and indicate their desire to protect the lake and its tributaries against pollution. This in itself, together with the standards, puts the necessary teeth into our law and should in future years give us the opportunity to better enforce our pollution law.

sgd. Thomas J. Trelease
Chief of Fisheries
Nevada Fish and Game Commission
Reno, Nevada

I might add here, that one of our drawbacks in the past has been in getting sufficient data and getting sufficient public support even when we did have pollution cases. And with the water quality standards that are being suggested at the present time between the two States this would help us immeasurably in setting down a hard and fast rule to those people who we find actually violating those standards and that we feel we would have good public support behind us in prosecuting those cases.

I think this would go a long way towards stopping some of the cases we have run into in the past.

CHAIRMAN STEIN: Thank you, Mr. Trelease. Are there any comments or questions?

(No response)

CHAIRMAN STEIN: If not, thank you very much.

MR. WHITE: Next appearance will be Mayor Chet Christensen of Sparks, Nevada. Chet?

STATEMENT OF THE HONORABLE CHESTER S. CHRISTENSEN, MAYOR OF SPARKS, NEVADA

MR. CHRISTENSEN: Thank you very much, Wally. Mr. Chairman and members of the Conference:

My appearance here and the few remarks I make as an introductory statement before I present Mr. Henry, you may like and you may not like. I am not a youngster in this field. I have worked with Wally White for many years. I spent some 15 years in the State Legislature working with all types and kinds of problems of this kind, but we do have a statement, an introductory statement, so that there will be no doubt in anyone's mind who is working on this problem, where the City of Sparks thinking is.

I am shocked that you are here today having this Enforcement Conference on the Tahoe Pollution problem. It is unbelievable that the Federal Goverment is here again to bare the soul of the Tahoe sewage pollution. But on the other hand, you are undoubtedly meeting my presence here with mixed emotions.

Where are the recommendations and findings of the conference we attended here some 900 days ago. How is it that the problem of sewage is again critical when we have not been informed officially of any real solutions to solve it. Oh yes, we have received information through the newspapers on a hit or miss basis. What we found when we pried into the matter was proposals to solve the problem by dropping the effluent from the lake into our water supply. That we rejected in October 1963. That we reject in July 1966.

It matters not one particle that Federal researchers have at last agreed with the research for Placer County on sewage export. Our research shows the export plan of Placer County and endorsed, by who else who knows, as the worst possible solution. Export plans that will degrade the Truckee River and end up costing the taxpayers more than a distillation process certainly cannot be swept under the carpet - not at this hearing and not at any hearing. Gentlemen, we will not stand idly by and allow the degradation of the Truckee and you can take that as a threat that will be backed up.

Give us proposals that can work. Show us proposals that are economically feasible. If it hurts your feelings to deal with a lowly city government and its officials, then please talk with our district health officials. We even feel out of place being here. These sewage export plans that are even faulty from within are totally unacceptable to us.

How can a thing like this happen? Jurisdictions that are greatly affected by a water degradation scheme on the Truckee have not even been advised of an enforcement conference such as this. From this great meeting comes the decision to export or not export, so notice becomes very significant. Let me remind you that we will not be dallied with, cut short, or embarrassed into supporting a grand whitewash of defective research.

Gentlemen, this is not a protest. We believe you have not heard all there is to know about this subject and we have taken the unwelcomed task of telling you. Notify us if we are involved; back your research with facts and not assumptions, and remember that you can never, never, never preserve the pristine purity of Lake Tahoe and still pile 596,000 people on its shores. You just cannot do it.

We know that we are one of the few jurisdictions that have spoken against the established order of higher powers. We know of the plight of others gone before us, historically, who stood in the way of gold seekers, land ravagers, pelt hunters and railroad builders -- they were given a sack of beads and put on a reservation -- and without any water.

Respectfully submitted, in consultation with the City Council.

And with this I would like to present David Henry.

CHAIRMAN STEIN: Do you want to hold yourself available for questions and comments, Mr. Mayor?

MR. CHRISTENSEN: I would like our statement completed first.

STATEMENT OF DAVID B. HENRY, CITY MANAGER
SPARKS, NEVADA

MR. HENRY: Mr. Chairman, honorable members of the Conference, distinguished ladies and gentlemen:

David Henry

I have a presentation here that I don't know whether it is a protest or whether it is not. It depends on whether or not what we have to say is heard. If it is not heard then it should be registered as an official protest. If we can make our point, then it should not be considered as a protest whatsoever, but rather as an attempt to offer information to you.

The information that I have to offer to you has been presented to the City Council and approved.

Mr. Chairman, I would like to deliver this to your reporter.

CHAIRMAN STEIN: Without objection that will appear. How long is that?

MR. HENRY: Just for your file.

CHAIRMAN STEIN: Don't you want that in the record? If it is not too long, I will be glad to put it in the record. We will print that in the record, because someone may want to read this in reference to your point of view. These transcripts do get wide distribution. In the long run, by putting these documents in, we can save money by not having everyone search around for them.

MR. HENRY: Okay.

I have been directed by the City Council of the City of Sparks to appear before you today and make its views known. The City of Sparks is concerned with the question of water quality from source areas that feed into our water supply. As a down-stream user, we feel that protection of our water supply is essential; but we also feel that we have an absolute right to be kept informed on any plans, in the study stages, that can be implemented without us even knowing about them. The Lake Tahoe Pollution problem is misnamed, because this water pollution problem extends beyond Tahoe to the Truckee and Carson River Basins, although this fact is so obvious it appears to have been grossly overlooked.

THE LEGAL RIGHT OF SPARKS

I am submitting herewith a Memorandum from the office of the District Attorney of Washoe County regarding the authority of the City of Sparks under the statutes of Nevada. (The above opinion is contained in the Appendices of the Conference Document.) In reading it, you will discover concurrent jurisdiction with the State and the District Health Department to protect our water supply. Undoubtedly, you will quickly recognize a resort to the courts, so that the city can discharge its responsibility to protect its water supply.

We make no pretenses to interfere with the pollution control function of higher authorities, but we do have the right to be assured, with straightforward language, that our water supply will neither be diminished in quantity nor be degraded in quality. We do have the right to expect that higher authorities are preparing plans in keeping with the development potential of Sparks for its ultimate water requirements, particularly if they are doing so for other communities.

We have been through quite a number of years of planning and working with Mr. White's office and he has been very helpful in assisting us in getting a plant that we will have in operation some time this fall. We started exactly five years ago in the study stages. We are seeing some benefits but it is costing us a pretty penny.

We do have the right to expect that any plans to guarantee water qualities in lake and river basins that will directly affect us will demonstrate research that will assuage our fears of water degradation.

We do have the right to protect, with all of the legal means at our disposal, the development potential of our city when it is put into balance with another community, particularly when that other community expects to exploit its economic resources at our expense.

The history of natural resource exploitation - land, water, lumber, and minerals - mixed with historical patterns of affluence and influence, demonstrates the validity of our concern. Remember the Owens River Valley, to name but one.

THE PROBLEM WE FACE

In the first instance, we have no assurance that our water supply will not be diminished in quantity. We participated with Reno and Washoe County to analyze the Compact Draft, and concluded, as did the Larson & Skeen Report, that the Compact Commission Draft is woefully defective on this matter.

The citizens of Reno and Sparks of Washoe County spent $6,000 to prove it. Now, this is not our place to do that, Mr. Chairman, I would suggest, but we found it necessary to do so and we did.

David Henry

In reading the newspapers, we discovered that pollution plans that affect our Truckee River water supply are being generated by Lake Tahoe interests and State agencies. The newspaper accounts of those proposing the plans have belated praises and adulation for such plans. Nearly a year after a set of such plans were set before the Placer County Supervisors, we received a copy of the report. Again, no State agency took the time to assure the City Council of Sparks of the value of the pollution plans proposed by the California authorities. Nonetheless, a bare resolution of endorsement was sent to Sparks for passage. The Council did not take such news accounts at face value, but immediately engaged Kennedy Engineers to review the Placer County alternatives. I want to assure you our mind was completely open as to whether or not the alternatives were acceptable. How are we to know? I cannot claim to either be an engineer, lawyer, biologist and none of the members of the Council can claim to be the same. We resorted to the consulting service, namely, the Engineering Science Report Tahoe "B" alternative which was favored by many. Our consultants reported in February 1966 and stated in part "that Plan B-#2, of all the alternatives proposed by the North Shore Report, imposes the greatest potential hazard of contamination of Truckee water... and would almost irrevocably commit the North Shore area to raw sewage export." A copy of that report by Kennedy Engineers is submitted herewith.

(Whereupon the report entitled "Review of Waste Disposal for North Shore of Lake Tahoe of the City of Sparks, Nevada - February 1966" by Kennedy Engineers, is made a part of the record of the

Conference and is on file in the Southwest Regional Office, Federal Water Pollution Control Administration, San Francisco, California.) I would like to read a couple of excerpts from it.

Speaking of the Tahoe B proposal. "This, of all the alternatives proposed by the North Shore Report, imposes the greatest potential of contamination of the Truckee River water, effluent of the Truckee River water supply of Sparks and Reno and, in addition, would almost irrevocably commit the North Shore area to raw sewage export. They would then not be in a position to take advantage of advances of technology of the disposal of sewage effluents with the Lake Tahoe Basin in the future. There is no question that the adoption of Plan B by the North Shore area of Lake Tahoe as a method of sewage disposal should be vigorously opposed by Reno and other downstream Truckee River water users.

In addition it is likely that a great deal of concurring opposition to this plan would come from other affected areas if made fully aware of its effects and it fully presented the facts on other alternatives, views to the Lake Tahoe pollution problem."

And I should suggest, gentlemen, that we did recognize this.

"The studies of the Lake Tahoe pollution problem originally reported in June 1963, in a report entitled, 'Comprehensive Study on Protection of Water Resources of the Lake Tahoe Basin to Control Water Disposal.'" This previous report was also reviewed by Kennedy Engineers.

"At that time the City of Sparks said, 'Absolutely no dumping of effluent into the Truckee River.

"The most prominent deficiency--" and this is the question to our argument and it is not just academic---" The most prominent deficiency of the Lake Tahoe pollution studies of the past years is the limitation in scope and area of study. Thus, full recognition of the effects for plans of protection of Lake Tahoe on other areas of the Truckee, Carson and other contiguous water basins have not been recognized. There is urgent need for comprehensive study of watersheds in relation to alternatives, to solutions of Lake Tahoe pollution problems."

Mr. Chairman, I would like to leave this with you.

We have yet to see a master water development plan updated and keyed to a financing time-table for Sparks. Is this city going to have to pay for such a master plan, or will the State or the utility company do this?

In short, our problem of protecting our water supply is compounded by the hit or miss information we receive on the activities of other agencies who can take actions that will adversely affect us. Our consultants on the question of water quantity indicate that such plans as are now proposed do adversely affect us.

I would like to submit, Mr. Chairman, my only copy -- I will get another one -- of the report prepared by Mr. Larson and Mr. Skeen, a water engineer and water attorney (E. J. Skeen, Salt Lake City, Utah) who did this study in the Interstate Compact Commission.

I think we should make the point that there is a tie-in and would like not for it to be copied but for you to have a copy.

CHAIRMAN STEIN: We would like to have a copy.

(The report referred to is contained in the Appendices to the Conference document.)

MR. HENRY: Our consultants on water quality also indicate plans from other jurisdictions that adversely affect us. At the same time, our own State agency has told us there is nothing to worry about -- verbally, of course.

We have bonded ourselves extensively to handle the increased Health Department standards on water quality. And, frankly, I think they are very good. The Council would not take any action to pass a rate ordinance, so Mr. White found it necessary to shut down construction in the City of Sparks for several months, and they did pass the rate ordinance and released the building program on the city, and today we have a plant to prove that action was taken, and we owe a great deal of gratitude to Mr. White for taking that action. Pretty tough, I will tell you that.

We received a sum of money for Federal participation under standards formulas. Now, it appears that special formulas are being devised to deal with the Lake Tahoe problem. Perhaps, we should ask for a special formula for State and Federal funds to preserve that natural beauty of Pyramid Lake.

I would suggest, gentlemen, that it might be a little difficult to get a special formula through Congress when it could be pointed out that the special formula is for the purpose of building and developing one area which would then contaminate another. Of course, there would be quite an argument about what contamination is, but I think our argument about mineral contamination is certainly as valid as the emotional problem of the downstream users concerning effluent drinking.

Permit me to enter into the record an editorial of the Pacific Sun, dated May 25, 1966, that speaks directly on this question. It is a little newspaper over in San Rafael, California.

CHAIRMAN STEIN: You just want to put it in the record, or do you want to read it?

MR. HENRY: It isn't long--I would like to read it.

"The Legislature has voted to give a 1.8 million dollar loan to the South Tahoe Public Utility District and the Federal Government is going to give the district a grant of over $3 million. This money will allow the district to pump its sewage water out of the lake basin and over to Alpine County. What a bonanza for Alpine County. Twenty million gallons a day of effluent, good for irrigating Diamond Valley. That's an awful lot of water to be sending away from the lake. There is no concurrent program to replace it with water of comparable quality.

"All of us gentle taxpayers are, in effect, paying out millions to bail out the local governments and agencies of Lake Tahoe which allowed the current serious pollution situation to develop. Local government, what there has been of it at Lake Tahoe has been interested mainly in encouraging growth and development. Well, they succeeded.

Tahoe has grown and developed and we are paying for it while the promoters continue to wreck the beauty and ecology of the lake.

"In the years ahead, we will be asked to pay more, much more, for the salvation of Lake Tahoe, and we will agree to do so because Lake Tahoe is worth saving no matter how it got into its predicament.

"But it is one thing to pay for protecting Lake Tahoe, it is another to subsidize the further ruination of it. There is a great promotion now and the business interests at the south end of the lake are leading it, to rush through to completion of the protected Highway 50 freeway between Sacramento and Nevada line."

CONCLUSION

Today we are primarily concerned with the pollution problems of the Lake Tahoe Basin only. Today you will review a report on the pollution problems of the Tahoe waters only, justifying the call for this Conference under Federal law. We received a copy of this yesterday. We have assumed that the purpose of the Conference was to arrive at a decision. We have assumed that the basis for this decision was basically this report that was prepared by the Federal Government. I might tell you that if we came to a hearing at the city or county level to make a decision and presented the facts upon which the decision was to be made without noticing the parties who are concerned and then passed an ordinance, we would be skinned alive. Apparently, your Honorable Conference members and The Honorable Secretary of the Interior are concerned with the degradation of the interstate waters of Lake Tahoe. Would it not be most appropriate at this time to consider also the requirements of the Water Quality Act of 1965, which calls for the development and enforcement for the entire watershed. This, therefore, would include not only the waters of Lake Tahoe, but also the waters of the Truckee Basin. The Truckee Basin is locked inseparably to the waters of Lake Tahoe and have been so locked since man's memory runneth not to the contrary.

Consequently, we request that any solution to the pollution problem of Lake Tahoe must certainly take into account the Truckee Basin waters and the effects of a degraded downstream water supply in evaluating solutions to the Tahoe problem.

When you consider the fact that water can be degraded by minerals and trace elements, as well as biological organisms and pathogenic contaminants, I think you will agree that we have a point.

We are sure that we can count on your Honorable Conferees to insist upon a total analysis of the Tahoe, Truckee, and Carson Basins before any patchwork, piecemeal, unsubstantiated and uncoordinated plans, inspired by real estate exploitation and expediency are allowed to destroy irreparably the natural beauty of not only the Tahoe Basin, but also the Truckee and the Carson Basins. We feel the questions of financing are as important a part of such studies as engineering reviews and analysis.

In short, what we have found so far has been short-sighted financially questionable from a health point of view and highly expedient.

Mr. Chairman, that concludes the comments that we have. If you have any technical questions -- as I say I am not an engineer

--we have a representative of the District Health Department here. We have Mr. Dick Kennedy, of Kennedy Engineers, with regard to any question on this.

I would think that if the technical questions were brought up in a subsequent conference with these people, you would find it very, very challenging.

CHAIRMAN STEIN: Thank you, Mr. Henry. Do we have any comments or questions from California?

MR. GRADER: My name is W. F. Grader, Assistant Administrator of the State Resources Agency.

At the present time, the North Basin effluent is being discharged and is reaching the Carson River through percolation. Now, Plan B, as I understand it, will simply collect it and probably treat it and it will also reach the river. So, Plan B will certainly improve your situation rather than harm it. I don't see where it is going to harm the situation. I beg your pardon, I mean the Truckee River.

MR. HENRY: I probably should ask Mr. Kennedy to come up here. I will just read a couple of sections out of the report. I can assure you that the report very clearly states that the plan that was proposed is the worst--that there are some alternatives in here that frankly aren't half bad, but Tahoe B is not it. Do you want me to go beyond that or let me call Mr. Kennedy, or I will read from the report?

CHAIRMAN STEIN: I don't know that we had a responsive answer to Mr. Crader's question. If you want to call on your technical support to answer the question, we would be glad to have it. But I think as the record shows, the question was not answered. I am not sure we really do have a responsive answer unless you think it is.

MR. HENRY: Would you state the question again, please?

MR. GRADER: Well, it seems to me these effluents are now reaching the Truckee and they are being discharged from inadequate treatment plants and septic tanks. Now, under Plan B, it would be collected, and it would be certainly treated to a far greater degree than it is now. So, you would have superior effluents reaching the Truckee River. It seems to me, at least, your condition would be improved over the present position?

MR. HENRY: Well, perhaps, we are not satisfied with the present conditions.

MR. GRADER: Now, let me ask one other thing. You make a statement here that you said "irrevocably commits the North Shore area to raw sewage export." What is the basis of that statement?

MR. HENRY: It is based on the fact that experience with governmental entities is that once they spend a few million dollars on something--well, it is the old joke that if the Government had built the Edsel they still would be doing it. If they spend a little dough on it, even if it's a half-baked scheme, they will never back out.

MR. WHITE: I think the answer to the question, Bill, is this: actually Plan B does anticipate collecting the sewage from both sides of the lake.

I think what you are saying, Dave, is that the export is in the line down the Truckee River Basin to a treatment plant in the Martis Valley. This is what you mean? This is true. This is export. It is conducting a treated effluent. This, I think, is what you are saying.

MR. HENRY: That is correct. Right. We have some other ramification, too. This is part of it.

MR. GRADER: You are not discharging raw sewage, though?

MR. WHITE: No, no, no! I am sorry I got in this. This bothered me the way he said it.

MR. HENRY: In other words, there is a line that runs across the state line that is an interstate export of raw sewage. Oh, no, it goes down the river, up to the plant, into the talus slope, down into the ground and back in the river.

MR. WHITE: There is no interstate here in the export. If you want to say you are taking raw sewage, collected sewage out of the Basin for treatment, this is right. I think we agree to this. This is correct, for treatment.

MR. HENRY: Well, eventually it is discharged, of course.

Let me read the section of the report:

"Export of raw sewage from the Lake Basin is not only contrary to the proposals of the 1963 report on protection, etc., but also contrary to the originally proposed California-Nevada Interstate Compact, Article 5, Section G. The relatively large investment in raw sewage trunk sewer, pump stations and sewage treatment plant remote from the Lake Tahoe Basin would almost preclude the recommended future effluent disposal within the basin at a time when the technology of sewage treatment could make feasible the removal of nutrients and other materials deleterious to the water quality of the lake."

MR. GRADER: Well, I think, Mr. Henry, California's position is that we are not willing to wait for some technology in the future to solve this problem.

MR. HENRY: What have you been doing up to now?

MR. GRADER: Well, we have been working on it, and I think we have made substantial progress. And when the time comes, we can solve it and remove the minerals from the effluent. Then, perhaps, we will have a different program. By the same token, I don't think that California is proposing nor Governor Brown willing to transport a problem out of the Basin to become a problem somewhere else.

MR. HENRY: That is exactly what we are objecting to.

CHAIRMAN STEIN: Let's clarify this for the purpose of the record. Someone is going to have to read this. The point is, Mr. Henry. and Mr. Grader, so far I have been sitting here for a day and a half and I haven't heard anyone yet propose to export raw sewage from the Basin and discharge it. Now, is there a proposal to do this by anyone?

MR. WHITE: No. May I ask Mr. Kennedy for a clarification on that? He wrote the report. He is back there someplace.

MR. HENRY: This point here is relatively minor in comparison to the total point we wish to make.

CHAIRMAN STEIN: This may be a relatively minor point; I don't want to speak for the State. But if all the States were faced with the problem of discharging raw sewage from one watershed to another, I think we would really have a problem, philosophically as well as otherwise.

MR. KENNEDY: I think the point made this morning is that if collection is made from here, around to the plant, and then from there on, it is raw sewage that comes clear around here to Martis Creek.

If you are taking the Tahoe Basin as such, which everyone is talking about, there is a discharge which is a conductance of raw sewage from the Tahoe Basin to Martis Creek.

MR. GRADER: But there is no discharge of the sewage?

MR. KENNEDY: Well, it is raw sewage discharge from within the Basin.

MR. GRADER: It is in a closed system?

CHAIRMAN STEIN: You mean a raw sewage discharge in pipe?

MR. WHITE: Yes.

CHAIRMAN STEIN: Well, now I get your point.

MR. KENNEDY: On the other hand, you show this as being your Basin as outlined here. This is definitely a program bringing the water quality 50 percent closer to water supply use. It is going to be taken down there for treatment, but it does preclude any of the alternates that might come back here in the lake.

CHAIRMAN STEIN: I am sorry.

MR. KENNEDY: We have not--if there has been any misunderstanding here that we are complaining that this is a raw sewage discharge, that has never been the contention; that was never what we were implying. As I understand it, from the evidence that has been presented here, and, as Mr. White has well put it, there is no discharge into the Truckee at this time.

MR. WHITE: None anticipated?

MR. KENNEDY: That is right.

MR. WHITE: Okay.

MR. KENNEDY: That has nothing to do with the quality of the water.

CHAIRMAN STEIN: Go ahead, Mr. Henry.

MR. HENRY: I am sorry I didn't make it clear. We are not intending to confuse the members; we are confused enough on this thing.

CHAIRMAN STEIN: Any other comments or questions?

MR. WHITE: You mentioned you had a protest here that there was special considerations being given to the Basin. Now, actually, the Federal law, under which we got our money, P.L.660 funds, changed and was liberalized as time went on. In fact, you got a special consideration and a doubling of your funds. Now, do I understand you are protesting we didn't give you as much as we could?

MR. HENRY: Had it not been for you, we would have gotten half as much as we did. We are aware of this.

MR. WHITE: I thought I did a good job.

MR. HENRY: It was worth $600,000.

MR. WHITE: This is correct. This is not true, Dave.

MR. HENRY: We are saying that if special formulae are going to be developed for Tahoe Basin--special as opposed to what has gone on--then we think you would have a difficult time in the Congress.

MR. WHITE: In Nevada, obviously, if there is a change in law, we would take a full range view of this. Knowing you and your Scotch tendencies, we would anticipate you would come screaming and we would listen.

Dave, what do you do with your sewage now?

It is on your next to the last page, under conclusions and enforcement for the entire watershed.

Now, you're discharging poorly-treated effluent in the Truckee now?

MR. HENRY: That's right.

MR. WHITE: Yes, and so is Reno.

MR. HENRY: That doesn't change our point of view. It is being corrected.

MR. WHITE: You will correct it, yes, by terrific effort of all of us, Reno, Sparks--and believe me, gentlemen, when you can get two Cities like Reno and Sparks to work together--but we did this and jointly have constructed a plant which we anticipate will be in operation this winter, Dave?

MR. HENRY: Yes.

MR. WHITE: And this plant will produce an effluent under 20 parts per million BOD and settleable solids to the Truckee River, right?

MR. HENRY: That is correct.

MR. WHITE: Now, upstream here we are anticipating treating this effluent and I am sure you were here when I asked the engineers, Dewante and the rest of them, their standards. An activated sludge treatment plant designed liberally and including these same kind of criteria for design here plus discharge to land.

Now, actually we would assume there is a possibility that this might be filtered back. But there would be no intention, and I think throughout, as Murray stated, from the start of this conference, there was a flat statement by the Governors and everyone else that we did not intend to create a problem. The treatment would provide protection to the Truckee, and it will provide protection to the Truckee or none of us would intend putting it in. Is this about right, Bill?

MR. GRADER: That is right.

MR. WHITE: I would go further and mention in the historical records of the various relationships between Nevada and California, in an attempt to clean up the Truckee during the administration of Hiram Johnson of California, we did have a suit with California on the discharge and we lost because of the very thing you are speaking of here. There was adjacent to our State Line a cattle-dipping chute discharging into the Truckee.

Now, I believe that this plan is compatible with our use. I would agree that we would intend to protect our water supply and must protect the water supply, and it is an entire Basin development.

CHAIRMAN STEIN: Any further comments or questions of Mr. Henry?

MR. HENRY: I would like to, shall we say, rebut some of what Mr. White said.

MR. WHITE: Well, if you are rebutting it, I am saying this is what is going to happen.

MR. HENRY: Just let me relate a fact. It amounts to this: you were saying several years ago--it was four years ago I think. I was going to say "finagled," but I won't, an additional sum of money from the Federal Government to help build the joint facility for Reno and Sparks. Since then, the laws have been liberalized so that jurisdictions coming in now are going to get a better benefit. That's how I understand it. Back then, there were no water quality standards established by the Federal Government.

Now, your point about the fact that the Reno-Sparks plant contaminates the river, I think we know that as well as you do. Your probably know it technically a lot better, but we have a question of historical use of water that I want to raise on top of a tall flag and hang it. The historic use of water in Reno and Sparks has been there many, many years back from the territorial days, and there have been pollutants in the river.

Since political subdivisions have been constituted, that historical pollution existed prior, in fact, to the people who lived down in the Fallon area--prior, in fact, to the Newlands' project.

So, the water quality standards in 1965 got here first. Frankly, we wouldn't have much of a case standing before you today had not those water quality standards been established. We do raise a question that our contamination is being resolved, but future contamination under the 1965 standards certainly does raise a question. I still want to make the statement of historical use.

MR. WHITE: Dave, what do you intend to do about your discharge into the Truckee?

MR. HENRY: Operating the plant at maximum efficiency is the first thing. We are going to fight like the dickens to keep our water supply from being compacted away. I do not represent the State of California and am speaking strictly for Sparks.

MR. WHITE: You mean Nevada?

MR. HENRY: Sparks, Nevada. That is right.

We want that water for dilution and for use. Without the dilution our plant will become extremely expensive to operate.

Now, I think, without the standards that have been set, and they are good standards, that we will not have to use the maximum treatment facilities cf that plant at all times because of dilution so that we can stay within the requirements.

MR. WHITE: You know this is illegal, Dave?

MR. HENRY: There are a lot of things that are illegal.

CHAIRMAN STEIN: Mr. Schreeder?

MR. SCHREEDER: Mr. Henry, either yourself or the Honorable Mayor made a comment that indicates that there is some connection between the municipal water supplies of Sparks and Reno. And the implication is that degradation of the Truckee River will affect the supplies. This implies that the water supplies are diverted from the river. Would you or your technical representative describe for the record the water supply of Sparks and of Reno, if they have a connection, so that there is some idea of the basis for your objections to the degradation, the alleged degradation, of the Truckee River and the North Tahoe export plan?

MR. HENRY: Mr. White, perhaps, could answer that.

MR. WHITE: The description of the Reno-Sparks water system, there are diversions from the Truckee River in three places where the water is treated and goes into the mains of the City of Reno and Sparks by a private public utility. Our future water supply has got to be the Truckee River and that is pretty much the present supply. Treatment is pretty high grade chlorination with long detention periods. There is sometimes coagulation. Will this do it for you?

MR. SCHREEDER: I think so. Thank you.

CHAIRMAN STEIN: Thank you. Maybe we can clear something up. In your talk, Mr. Mayor, you indicated that we might feel out of place dealing with lowly city officials. We sure don't.

Let's get back to the point I wish to make in the Mayor's statement on the lack of notice. Our law, the Federal Act, was passed essentially as a compromise arrived at with the State agencies. The States had put forward the traditional States' rights concept. The law reflects this and says that the primary rights and responsibilities in abating pollution belong to the States.

The states made the plea that the Federal Government not get in direct touch with the parties involved at the initial stage of a Federal enforcement conference, but that the Federal Government deal through the state agencies.

Consequently, we were limited by law and are limited by existing law to notify the appropriate state and interstate agencies. As you have seen in the procedure of the conference, we turned the state time over to them and they called their own witnesses.

Now, for one reason or another, many of the localities and other groups have evidently felt the way you have about notification and the right to be heard, etc. This is reflected in the bill which just passed the Senate last week. This bill makes no change or very little change in the enforcement procedure. It makes a few. One of the changes is that the Federal Government will be responsible for putting on the program and notifying interested parties to the case. This has not passed the House yet. I don't know whether it will. But I think you will appreciate, Mr. Henry, that in dealing with our law, we carry out the law meticulously whether we agree with the provisions or not.

As far as dealing with the law, I think we can speak for both Nevada and California. In my judgment all of us, at least in carrying out our statutory mandate, have followed what our appropriate or respective Legislatures have given us. I don't think you can really imagine that Mr. White, Mr. Grader, and myself are really free agents. We are here, all of us, carrying our pretty specific directions and this is the point that you mentioned.

MR. WHITE: I can sympathize with Mr. Henry's comment on those. I think the State of Nevada and the State of California--I think to a certain extent the Federal Government--we were all creatures of circumstances. We could not control this, Dave. Neither do I want the State of Nevada and I don't think California either to be put in the position or even inferred that some place here we didn't give proper notice because we didn't have it either.

Now, the other thing, Dave, is I hope you will appreciate that as far as objectives are concerned with regard to this export and regard to protection of the river we would echo your concern, your methods of doing it, your concern with the protective devices not in accord with--if you tell me to protect the river, I think everyone here has said this will be done.

CHAIRMAN STEIN: Are there any further comments or questions?

MR. HENRY: I just have one comment in summary and that is, Mr. Chairman, I think it would be quite easy surprisingly to eliminate some of the objections that come from downstream users by simply producing research to show us that it won't hurt us. You say all we are doing is studying Tahoe and to heck with the Truckee and to heck with the Carson. You are going to have an extremely difficult time convincing us that we are not going----

MR. WHITE: Dave, you remember the very question of your own engineer in the construction of the present Reno City plant? Were all our standards high enough? At this time, for two summers in a row with a considerable effort of Public Health Service we spent great time on the Truckee. In fact, we had our facilities at your plant and had all your cooperation and we showed that the Truckee River has an effluent built-in protective device in it and that traces of pollution were lost very quickly in the Truckee. I am not certain of the exact distance. For instance, by the time we got to the steam plant, the traces had eliminated themselves. So we did some research.

Now I don't know what you are talking about, but there has been more than a reasonable thought.

MR. HENRY: I am sure there has been a lot more than possibly has been printed. I am talking about something of a master plan of that nature. We are talking about studies on the Truckee River. I haven't seen anything or had anything reported to me that shows mineral trace element study. Not a thing. Now, biological, okay. But how about mineral and trace elements. That is the question we would raise.

CHAIRMAN STEIN: Thank you, sir. If there are no further comments, thank you for your contribution.

MR. WHITE: I would comment that on the presentation by Mayor Christensen and Mr. Henry that we have paid careful attention to their comments. The protection on the Truckee has got to be a provision of any export and I think we are as conscious of this as anyone else. I would have to say, in the area of protection and preservation, this has been a concern and will remain a concern. It's nothing new. I think the exchange is between these areas and the people should be explained to. They are positive but not necessarily unfriendly, as far as I am concerned, and I hope to keep it this way.

I have two other appearances. No, there are four. I wish you would confine yourself to your written statement if you can and in answering questions let's make it as brief as we can and I would suspect along the same vein, perhaps, of concern, would be the statement by our next gentleman, Mr. McKissick, appearing for Washoe County. Howard?

STATEMENT OF HOWARD McKISSICK, SR., VICE CHAIRMAN BOARD OF COUNTY COMMISSIONERS, WASHOE COUNTY, RENO, NEVADA

MR. McKISSICK: Thank you, Mr. White. Mr. Chairman, Conferees and ladies and gentlemen, I do not have a written statement and I think my statement will probably end up in a question.

Let me state that I am speaking for -- my name is Howard McKissick, Vice Chairman of the Board of County Commissioners of Washoe County, being one of the representatives representing the City of Reno on that Board.

I have followed the water situation for some five and one-half years that I have been in the office with the California-Nevada Compact Commission.

I am very much interested in it,being an old-timer , and I think we are all concerned about it and all of Nevada and certainly in California.

Let me commend you for the interest of Lake Tahoe for your efforts and what you are trying to do to preserve the clarity of Lake Tahoe and the waters in the area up here.

We certainly can appreciate the efforts that are being made.

At the same time, I think I would be remiss if I said that we were not concerned downstream with pollution or quality and quantity of water. Certainly, we are concerned about that. We must be.

I think we are working on a lot of assumptions here. What I would like to try to assume is can anyone answer the question: what is going to be the end result when we get through with all these projects? We are assuming, of course, that by exportation of sewage we will not destroy the quality of water for the downstream users.

We are assuming, of course, by the exportation of sewage to the Carson River or to any other basin that we are not going to affect the quantity of water to downstream users. We are effecting a project costing many millions of dollars. For what? For the economic development of the Tahoe Basin? That may be very well but is it necessary?

We have a chart here with 1980 on it with a projected population of 418,000. We've heard the figure mentioned of 596,000 here by the year 2010. Is that the end result we want? Aren't we trying to save the Lake Tahoe Basin as a natural, national asset for recreation for the pleasure of people who would like to come to a virgin wilderness and enjoy nature as it is? Can we possibly have that situation with 596,000 people in the Basin? Aren't we going to develop problems that all big cities have--air pollution, traffic, garbage, even dogs? Believe it or not, we have a dog problem in Incline Village in our County.

So, let't look at that end result. How can we possibly answer it?

Water engineers or lawyers may have to get into this picture and give us this answer. Once we develop these millions of dollars, we are opening the land and Basin to speculators, subdividers; certainly utility companies are going to like it; builders are going to like it; labor is going to like it; banking is going to like it. It is opening up for them to come in and use, but what have we done when we have done it? Haven't we destroyed the natural beauty of the Basin? Thank you very much.

Mr. McKissick

CHAIRMAN STEIN: Any comments or questions? Mr. Schreeder?

(No response)

CHAIRMAN STEIN: Mr. White?

(No response)

CHAIRMAN STEIN: Thank you very much.

MR. WHITE: The next gentleman will be James Wood, representing Churchill County. Incidentally, Churchill County is approximately 60 miles along the Truckee and the diversion from Reno on downstream.

J. D. WOOD, EXECUTIVE SECRETARY, BOARD OF COUNTY COMMISSIONERS, CHURCHILL COUNTY, FALLON, NEVADA

MR. WOOD: Mr. Chairman, gentlemen:

I am here presenting this on behalf of the County Commissioners of Churchill County and also on behalf of a bi-county group which represents the Counties of Lyon and Churchill County Antipollution Committee.

Churchill County is gravely concerned over the proposals which have been made to export sewage effluent from the Lake Tahoe Basin for discharge into the Carson River Basin. As you may know, Churchill County would be at the ultimate receiving end of any wastes discharged into the Carson River Basin. We strenuously object to being placed in this position, on the grounds that there is no legal basis for the wholesale export of wastes into a watershed basin which originate outside this Basin, and on the grounds that this proposed plan would constitute a direct violation of the Water Quality Act of 1965.

Our consultants have recently reviewed guidelines applicable to the setting of wastewater discharge requirements, as established by the Federal Water Pollution Control Administrator, which are directly applicable to the question of exportation of wastewater from the South Tahoe Area, inasmuch as Federal funds have been committed for this purpose. We believe that items 1 and 2 of the Federal guidelines for setting water quality standards are particularly applicable when considering the exportation of wastewater into the Carson River Basin. These criteria are as follows:

> "1. Water quality standards should be designed to 'enhance the quality of water.' If it is impossible to provide for improvement in water quality at the time initial standards are set, the standards should be designed to prevent any increase in pollution. In no case will standards providing for less than existing water quality be acceptable."
>
> "2. No standards of water quality will be approved which provide for the use of any stream or portion thereof for the sole or principal purpose of transporting wastes."

It is our contention that these criteria cannot be met by permitting the discharge of wastewater into the Carson River Basin which is of a lesser quality than that which could be safely returned to Lake Tahoe. The existing quality of surface waters flowing into the Carson Valley, together with the waters of Lake Tahoe and the Truckee River, is among the very best in quality among the few remaining relatively unpolluted sources of raw water in the United States. The present quality of the inflow to the Carson River Basin is generally superior to that of Lake Tahoe.

As the projected year 2010 development as indicated by the

Lake Tahoe Basin Study of June 1963 (for the Lake Tahoe Area Council) and assuming complete "secondary" treatment, wastewater exportation from the South Tahoe Area including both the Area in California and Nevada, into the Carson Basin would increase Total Dissolved Solids discharged into the Carson Basin by 5,000 tons per year. This represents an increase of some 380 percent over present conditions during the critical summer month flow. This condition would clearly represent a violation of Federal criteria, Item No. 1, previsouly stated which requires maintenance of existing water quality.

In addition, wastewater under these conditions would constitute 55 percent of the total inflow to the Carson Basin during the critical day of record and 45 percent of total inflow during the critical month of record. Assuming this wastewater to be conveyed in the West Fork, Carson River, critical day flow would consist of 84 percent of wastewater and critical month flow would consist of 76 percent of wastewater. This is clearly in violation of previously stated Federal criteria No. 2, which prohibits use of any stream for the principal purpose of transporting wastes.

There are the additional implications to be considered relative to the transport of resistant viruses, particularly infectious hepatitus, as well as others suspected but not clinically isolated. There are both the organic and inorganic constituents of wastewater, which are refactory to secondary sewage treatment. And there is detergent, which remains a serious nuisance even at concentrations down to one-half milligram per liter.

Our consultants, Kennedy Engineers, have advised that there is insufficient water resources within the Lake Tahoe Basin to support the projected population of year 2010 without supplemental diversion from the West Fork of the Carson River. The implied threat of exchanging new for used water is considered to be a challenge to the basic water rights of the Carson River Basin. The exportation of wastewater from the Lake Tahoe Basin is not a solution to the Lake Tahoe problem. It is at best a costly expediency which merely relocates the problem to another sacred area.

We urge that the "Lake Tahoe Problem" be approached on a comprehensive basis which balances the interests of all affected parties, and we suggest with all respect that the economies of treatment as required to permit return of reclaimed water safely to Lake Tahoe be seriously studied and evaluated in detail as an alternative to the nonsolution of exportation. There have been substantial improvements and significant gains in the economics of wastewater reclamation within the last three years which we feel may be competitive with a costly export system which must be constructed through imposing terrain and which must be maintained under severe climatic conditions.

Churchill and Lyon Counties are at the present time developing an extensive recreational area at Lahontan Reservoir. Federal, State, and County financing of this project are being used. It is felt by the people of Churchill County that any additional effluent entering the Carson and Truckee River Basins would seriously jeporadize this recreational development.

We have no quarrel with the maintaining of the quality of the water of Lake Tahoe; but we certainly feel that it should not be done by creating a problem in another area. We believe that this problem should be studied further and that a solution to this pollution problem be solved to the satisfaction of everyone concerned.

If some immediate voluntary solution is not offered we in Churchill County intend to use recourse to the Courts to protect the water quality of Churchill County for domestic, fish and wildlife, irrigation, industry, and other beneficial uses.

This presentation offered on behalf of the County Commissioners of Churchill County, Nevada.

CHAIRMAN STEIN: Thank you very much for your statement. Are there any comments or questions?

(No response.)

CHAIRMAN STEIN: Maybe in order to avoid what I consider fruitless possible future problems, sir, I don't know that (and this is my opinion) the plans proposed here by Nevada and California are in violation of the Water Quality Act of 1965 other than perhaps merits or demerits.

Speaking to the sole question of whether they violate the Act of 1965, whatever your interpretations of the guidelines, right or wrong, does not necessarily make that a violation of the law.

Now, I would ask you and your people to look at that position very closely, because I don't like to have us go up dead ends and spin our wheels when nothing fruitful can come out of it.

I think you do have a lot of spinning. I will give you my opinion for what it is worth. Whatever the merits of these proposals, I have been working this water field since 1948. I do not think the proposals that we have heard this morning are in violation. Commissioner Quigley, who is also a lawyer, and heard these plans, I don't believe thinks these are in violation, because if they were, I am sure he would have made that position known to me forcefully.

I am not asking you to change your position. I am asking you to reevaluate it on that point.

MR. WHITE: Mr. Hiibel represents the Lahontan Water Project in Churchill County and he does have a statement.

STATEMENT OF PHIL HIIBEL, MANAGER, TRUCKEE-CARSON IRRIGATION DISTRICT, FALLON, NEVADA

CHAIRMAN STEIN: Are you ready to go?

MR. HIIBEL: Yes, thank you, Wally. Chairman Stein and members of the conference and ladies and gentlemen:

I am Phil Hiibel, member of the California-Nevada Interstate Compact Commission representing the Truckee-Carson Irrigation District at Fallon.

"I will try to say in a few words what really requires volumes to set forth clearly. Please understand that this leaves much unsaid.

Phil Hiibel

"The Truckee-Carson Irrigation District extends its best wishes for success to all those people who have joined together in the campaign to preserve the beauty and purity of Lake Tahoe. The District pledges its support of this movement as long, and only as long, as the movement is so directed as to recognize and protect the rights and the welfare of downstream areas including the Newlands Reclamation Project being operated by the Truckee-Carson Irrigation District under a certain contract between the District and the United States, agreed to and signed in 1926.

"The District seeks nothing in the way of water or rights and privileges beyond that already agreed to in the 1926 Contract, and those rights bestowed upon it by the Federal Court in the 1944 Truckee River Decree and Agreement. In the 1926 Contract the District assumed the obligation to pay for Newlands Project works, lands and water rights as such costs were determined by the United States Congress to be chargeable to an 87,500 acre project. The District has in fact met this obligation in spite of the adversities of droughts, national financial depression, earthquakes and floods. It has operated the project at all times in full accordance with the 1926 Contract and the 1944 Truckee River Decree, and it expects to continue to operate in the same fashion.

"The District agrees there is considerable loss of water in transportation thru the Newlands Project canal system. However, most of this water is recaptured and used to supply the District community pasture, the Fish and Wildlife area at Stillwater, the

Nevada Fish and Game Fernlay Marsh area, and the Pyramid Indian irrigation right. The District hopes to eliminate canal losses not now being recaptured by concrete lining to be financed largely from proceeds from the lease of the 64 acres near Tahoe City, which the District has paid for as a part of the Newlands Project. The title to this land, it is true, rests in the United States as does all other parts of the Newlands Project. However, the land is not 'public domain' in the usual sense of the phrase." I thank you.

CHAIRMAN STEIN: Thank you, Mr. Hiibel. Are there any comments or questions? I am sorry we had to make you wait before you could put that up. But we entertained the notion that there might be another view that there was waste of water in the Newland Project when it came up, and we are glad to have your views on that.

MR. HIIBEL: Thank you, sir.

MR. WHITE: You recognize he did say the correct things and intended to do something about it?

CHAIRMAN STEIN: Yes.

MR. WHITE: I would have one additional discussant and when he is through if there are any other Nevadans, I will call on them. As near as I can see we will be through with the next discussant.

Mr. Gatter represents the League to Save Lake Tahoe. Mr. Gatter?

STATEMENT OF GEORGE S. GATTER, EXECUTIVE DIRECTOR, LEAGUE TO SAVE LAKE TAHOE, SAN FRANCISCO, CALIFORNIA

MR. GATTER: Thank you very much, Wally White, for your kindness to allow me to speak.

Mr. Chairman, gentlemen:

The League to Save Lake Tahoe is a homeowner association. We are dedicated to keeping the mountains green and in promoting the concept that all man-made changes should be in complete harmony with the natural beauty of the area. In other words, we want to seek the permanent perpetuation of a balance that will keep Tahoe the way Mr. McKissick so articulately pointed out for our children and for everyone.

The League to Save Lake Tahoe commends you for holding hearings, since we feel that all levels of government have a responsibile role to play in protecting this inter-state resource. We know that those who are gathered here can be helpful in solving the problems remaining at Lake Tahoe, and to bring them before the public, so setting the stage for effective action. The League is pleased to have this opportunity to present you with this brief report. The League is a non-profit organization of over 1,200 members, representing Tahoe homeowners and property owners'associations of both California and Nevada, and private citizens and groups elsewhere who share in the concern for Tahoe's future. It is dedicated to preserving the purity of the Lake and the beauty of its scenic environs, while at the same time securing orderly and harmonious development according to policies set forth in the 1980 Tahoe Regional Plan. The League seeks to accomplish these objectives by assisting and supplementing the efforts of the various Federal, State and County agencies operating within the Tahoe Basin. With nearly 80 agencies involved, the challenge is to bring all action into concert and to assure ourselves that no area of need is going to be neglected because one agency thinks some other agency is taking care of it. The League objectives are:

1. To keep Lake Tahoe blue
2. To keep the mountains green
3. To preserve the God-given grandeur of the Tahoe area for present and future generations
4. To promote the concept that all man-made changes should be in complete harmony with the natural beauty of the area
5. To make available the fullest possible recreational benefits of the area consistent with maintaining its beauty

The question of Federal jurisdiction in the Tahoe Basin is one which needs to be clarified. If you consider pollution only as a public health hazard, then the efforts being made by State and local agencies appear to have made significant progress. But if you are considering pollution to include contamination from any source which leads to economic loss, then there are some important unmet needs in the Basin which we believe deserve your attention.

Your "Report on Pollution in the Lake Tahoe Basin" conveys a picture of a constant nitrogen and phosphorus discharge from land activities to the Lake waters in all future years. However, you attribute such discharge in part to man-made soil disturbances which inevitably vary from year to year. If you have made an assumption (which does not appear in your report) as to the level of soil-disturbing activity in future years, we would be most interested in finding out what it is. We are particularly interested in this phase of the problem, because the Lahontan Regional Water Quality Control Board in its recent report removes itself from jurisdiction in this critical matter--yet we feel that these soil-disturbing activities are far and away the greatest source of contaminants threatening to eutrophy the Lake, as well as the principal threat to mountainsides which, with the Lake itself, comprise the scenic tableau for which Tahoe is justly famous.

May I digress just a moment and point out that this chart Mr. McKissick referred to is not a true representation of the source to which it is credited; namely: the 1980 regional plant. An earlier economic projection of it goes to 418,000 including visitors whereas the planned population was for 300,000 some odd which would be reached in 1972. But with the present trend, if we can use those terms, we would never suggest or propose or expect to go to 418,000 in the year 1980 and we agree with Mr. McKissick that this would probably be beyond the capacity of the lake to sustain those population levels with anything near the quality of environment we are all hoping to maintain.

It may be that without stringent corrective programs we can't even reach 300,000 and still maintain the quality that we are all giving priority attention to here today.

It has long been known that there are hundreds of thousands of tons of nitrogen suspended in the soil on the mountainsides above the Lake, like a gun pointing down at its clear waters; yet your report somehow assumes that only 50,000 lbs. of this will reach the

Lake in each of the years of this century. It seems to us that the real likelihood, based on present trends in soil-disturbing activities, is that a far greater quantity of these nutrients will reach the Lake than you have assumed, if there is not an early and effective curb on topsoil-exposing activities.

It seems to us that after $50 millions or more of public monies have been spent to create a vast Lakewide sewer collector and export system, we will have only succeeded in accelerating the rate of urbanization and overwhelming the nutrient--absorbing capacity of our clear waters with soil-originating chemicals, unless someone takes jurisdiction over hillside disturbance activities now.

We note with gratification your suggestion that forest-cutting practices need reforming so as to play a part in Lake protection; that highway builders need to replant exposed earth and build drainage systems that will effectively control erosion; that landfill operations should be scheduled for dry seasons and have diversion ditches to prevent nutrient runoff during construction; also that all disturbed hillside soil should be stabilized, restored and replanted; and that excavated material should be properly disposed of to prevent flushing into the Lake. We think all these are highly salutory suggestion; but we need to know which agency or combination of agencies will have the responsibility for enforcement so we can go to them and inquire as to their intentions.

We think that perhaps our best hope will be with the Bi-State Study Committee's recommended Regional Agency--but where are we to find effective enforcement to save the Lake during the next critical two years while the Regional Agency is being established? And who will get the job done if the States fail to adopt the Regional Agency charter? It is easy to speculate that the feverish rush of subdivision activity that will follow the construction of the sewer-collector could produce a green Lake before a single one of the protective practices you outline are put into operation--not to mention the appearance of the hillsides if every parcel is to be up for subdivision and development.

Will the highway builders respect your proposals? We have already been in vain to the California Highway Commission with proposals for a two-lane parkway in lieu of a destructive four-lane freeway. But we hope they will heed your proposals.

MR. FISHER: Excuse me. Has any 4-lane highway been built?

MR. GATTER: The Highway Commission insists----

MR. FISHER: Has any such highway been built or started?

MR. GATTER: They are now in process of acquiring a right-of-way.

MR. FISHER: Has any such highway been built or started? There are a lot of rhetorical questions----

MR. GATTER: ----As to construction, no. As to commitment, yes. Will the Water Quality Control Board take jurisdiction over land pollution, when they have just announced that they will not? We hope they will. Will the Forest Service of the Department of Agriculture respect your suggestions, or stop cutting trees? We hope they will. Will the counties enforce your grading and excavation standards on themselves and on all private developers? We hope they will. Will the Tahoe Regional Planning Commission work to implement your admonitions concerning hillside development on steep land, even though just last week they removed such restraining language from the 1980 Regional Plan? We hope they will. We hope that each of the more than 80 agencies in the Basin will march forward with their responsibilities in hand so that the total values of the Lake will be preserved. But, as we contemplate the crisis that is visibly upon us and the need for action by all those responsible, the question inevitably arises whether a two-year moratorium on all non-essential soil-disturbing and ground-breaking activities in the Tahoe Basin should be considered, in order to give these 80 agencies a breathing spell necessary to establish a fair and effective system for perpetual maintenance of the ecological balance, and so as to preserve for all time the wonder and the enchantment that have brought so many millions to these shores. There are many to whom such a thought will seem drastic. There are many more to whom the loss of Lake Tahoe's unparalleled beauty will seem more drastic.

Thank you very much.

CHAIRMAN STEIN: Are there any comments or questions? Mr. Fisher?

MR. FISHER: I have no questions. I do have a comment. I haven't seen quite so many rhetorical questions in one document, in one time, since I was a second year law student.

I do want to indicate to my Conferees that the Lahontan Regional Water Quality Control Board has not removed itself from any jurisdiction over anything which it has legal jurisdiction of.

MR. GATTER: Can we ask a nonrhetorical question? Who is responsible? We are having difficulty finding out. I am talking about the soil-disturbing activities that discharge into the lake by natural runoff nutrients which probably tend to provoke algal growth.

CHAIRMAN STEIN: Any other comments or questions? If not, Mr. White?

MR. WHITE: Are there any other presentations for Nevada?

I want the record to show that I did ask if there were any other Nevada participants and there are none.

I would thank the Nevada participants for their attention and I would assure them our awareness of their concern and thank you for appearing.

Thank you.

CHAIRMAN STEIN: Thank you, Mr. White. At the present time we will turn the management of the time back over to California, so it may call the witnesses. As you know, California cut short several of its participants so Nevada could keep up reasonably well on schedule.

MR. FISHER: Mr. Chairman, I appreciate the consideration of my fellow Conferees in calling back a couple of witnesses who did not testify. But because I feel they may be able to add something by way of questions and answers I would like to call first Chuck Martin, who is the Executive Director of the Lake Tahoe Area Council.

Chuck are you in the room?

STATEMENT OF CHARLES E. MARTIN, EXECUTIVE DIRECTOR, LAKE TAHOE AREA COUNCIL

MR. MARTIN: Mr. Chairman, Conferees, ladies and gentlemen:

You gentlemen are weary. The time is growing late. We have a brief statement on file with you and I am not going to belabor you further by reading that. However, I would like to point out one or two things which I think should be known to you.

Number one, there is a final study and summary of all the engineering plans with respect to sewage export. The final plans, as well as the physical plans, and the Lake Tahoe Area Council, again, through a grant from the Max Fleichman Foundation, is attempting to round up all this information and put it in one final document and hope it will lead to total export.

Now, we certainly do not disagree with the position that was taken by Mr. Gatter, who preceded me here; because we think it has become increasingly evident in recent years that sewage is not the evident factor. Silt and muck are being washed to the lake as the result of some bad land use practices and a clear and present danger to the clarity and purity of the lake exists as you will see in those photographs.

I was rather amazed last Friday, in the middle of July, when I drove down Highway 50, to see Trout Creek, which should be a crystal stream, a brown muddy chocolate color. Obviously, somebody up above was tearing up the soil to the extent that it was creating this condition and from those pictures here, you can see the result in the discharge into Lake Tahoe.

We are not all sure of the nutrient contribution from this source, but irrespective of the chemical reactions of this runoff in these pictures, it will show the visual turbidity and we hope that Professor McGauhey and our Board of Consultants may come up with some practical, scientific answers to the amounts of nutrients which are contributed from this type of thing.

We are sure from our visual observations that they are substantial. How critical they are is not known to us at this time. But it seems in addition to that, if we are to accomplish the things we have been talking about here for the past two days, it is far beyond the ability of the people of this small Basin to finance it. A great deal of Federal and state additional money should be forthcoming to preserve what we have as both the State of Nevada and State of California and United States of America's national resource.

Unfortunately, pollution is a very broad term which is easily misinterpreted, particularly when it is used in reference to Lake Tahoe. The remarkable thing about Lake Tahoe is not how badly it is polluted--but how much effort has been made to protect it from pollution.

A recent report compiled by the Resources Agency of California shows that the quality of the water in Lake Tahoe is excellent--good enough, in fact, to meet United States Public Health Service drinking water standards.

Great effort is being made to maintain the quality of the lake in its present condition. We are fortunate in both California and Nevada to have governors who have taken a personal interest in protecting this great natural resource. Substantial progress has been made, but the sewage export program ordered by the two states three years ago is running behind schedule. The deadline of export by October 1965 was not met and it now appears that it will be at least two more years before export becomes an accomplished fact.

The Lake Tahoe Area Council is hopeful that the export program will be expedited and that pollution control officials of both states and the federal Government will insist that protection of Lake Tahoe from nutrient chemicals of sewage origin will be accomplished without harm or hazard of any kind to residents of downstream areas. We do not intend to solve a problem here by creating one somewhere else.

It has become increasingly evident in recent years that sewage is not the only potential source of pollution at Lake Tahoe. Silt and muck being washed into the lake as a result of bad land use practices presents a clear and present danger to the clarity and purity of the lake. (see color photographs)

It is not reasonable to assume that urban development can take place around the lake without some increase in pollution resulting from street drainage and soil erosion--but we believe it is reasonable to expect that measures be taken to minimize pollution from these sources.

We note with great interest and appreciation the recommendations on this general subject on pages 32 and 33 of the recent report by A. W. West and K. M. Mackenthun of the Federal Water Pollution Control Administration.

Certainly the techniques of soil conservation and watershed management are well known and the best available knowledge in these fields should be used to the fullest extent possible on private as well as public land in the Lake Tahoe Basin.

If the Lake is to retain its present level of beauty and clarity, there must be as much time and effort focused on reasonable control of land use as there has been on the sewage problem.

The Lake Tahoe Area Council will welcome any assistance which your agency can give to state and local governments in developing enforceable regulations on land use practices in the Lake Tahoe Basin.

Thank you very much.

CHAIRMAN STEIN: Thank you very much. Any comments or questions?

MR. FISHER: I would like to call as the last witness John Thompson, Administrator of Environmental Sanitation of El Dorado County Health Department.

STATEMENT OF JOHN THOMPSON, DIRECTOR OF SANITATION, EL DORADO COUNTY HEALTH DEPARTMENT, CALIFORNIA

MR. THOMPSON: Thank you, Mr. Fisher. Mr. Chairman, Conferees:

You have on file my written statement and I will not read it in total. I do want to make one or two points.

Number one, I do represent the El Dorado County Health Officer and Board of Supervisors in my appearance here today. We merely want to point out that El Dorado County is, with the State and other agencies, well aware of the problems that have existed in the past and that we are taking very definite steps, I feel, to correct these problems.

We are requiring all the subdivisions that are approved in the County to have dry sewers installed at the time of development with the idea that they will be connected to the south shore or the South Tahoe Public Utility District as has already been mentioned as soon as collector lines can be installed.

There are no subdivisions being approved on the south shore without these dry sewers being installed. We are being as cautious as we possibly can with any new, private disposal systems being installed in the area.

We are watching very closely for water table problems and any other problems that may tend to pollute the lake or cause any further pollution to the lake.

We are taking every step possible along the lines as far as sewage is concerned. We do have a dump in the area of Meyers. This has been operated for some years in cooperation with the United States Forest Service. We lease land from them. This dump has a life expectancy of five years, not more than that, we are very certain.

We are taking every step possible at this time to locate a new dump site. Probably, not definitely at this time, but probably in the area of Kyburz, definitely outside the Lake Tahoe Basin.

All refuse from the El Dorado County portion of the Lake Tahoe Basin will be removed as soon as possible when the new site is located. This problem of refuse disposal has been brought up time and time again. We want it understood that steps are being taken to correct this problem. We also want to mention in line with the Meyers dump that we have already taken some steps in this direction, by the fact we have required approximately 1500 feet of 24 inch culvert to be installed at the base of the dump, so that the runoff of water, rain and snow melts, etc. can be carried past the dump and will not have to percolate through it and pick up all the nutrients that will harm the lake.

In closing, I want to state that it is the Department's and the County's belief that the readoption of the Water Quality Control objectives that have been adopted by the Water Quality Control Agencies in the State of California and with other material that is yet to be adopted, we feel that the problem or supposed problem, future problem of Lake Tahoe can definitely be solved. We do also feel that it can best be solved by cooperation of all agencies concerned; the Forest Service, Fish & Game and all other agencies. But it can far best be solved by the states and counties that are directly concerned with the problem.

We are aware of what is going on. If there are any violations, we will be the first to know of it and the first in line to take corrective action.

In line with your request for a statement from the El Dorado County Health Department regarding the pollution and/or contamination of Lake Tahoe please be advsied as follows:

This office has been cognizant of the problem of potential pollution and contamination of the surface waters of the Lake Tahoe basin, particularly the South Shore area, for many years. We have not only been cognizant of it, but have taken what we feel are positive steps toward its control. We have cooperated with the South Tahoe Public Utility District in attempting, with some success, to secure funds, locally through a bond issue approved by the residents, as well as from state and Federal sources. In order to enable them to enlarge the plant, extend their boundaries, and initiate an export system that has the full backing of the county, we have cooperated closely with State agencies in sampling and surveillance programs aimed at controlling discharges of any kind which may prove detrimental to the Lake waters. It should be noted that these programs are continuing and will continue into the future as long as it is necessary. We have succeeded in preventing any condition that could create a health problem to anyone, in or out of the basin - and will continue our efforts to do so.

For the past year this department has required the installation of dry sewers in every new subdivision, or unit thereof, that is approved in the Lake basin. Private sewage systems may be installed on a temporary basis until public sewer service is available if it can be demonstrated that the installation will not create a problem. Such installations are restricted to a maximum of 2,000 gal/acre/day to attempt to control the problem of overloading the soils. All private sewage disposal system permit requests are studied in detail and site inspection made on each individual lot before a permit is approved. We are being most critical to prevent systems from being installed where a problem may be created. Further, any system that gives any indication of failure must be connected to the public sewer if it is available. Areas near the District or surrounded by it, that were excluded from the utility district years ago, are being denied permits for further construction until the property has been annexed to the district and can be sewered. It is our considered opinion that the sewage disposal situation at the South Shore area does not, at this time, constitute a threat to the health and safety of any one, in or out of the area.

We are also aware that not all pollution is caused by sewage. At the present time the refuse for the basin is disposed of at a cut and cover dump located in the Meyers area. To prevent an excess of nutrients travel to the lake, this department, in cooperation with the Forest Service, owners of the land in question, required about 1500 hundred feet of 24 inch steel culvert to be installed at the bottom of the dump. This allows run-off water to flow freely to the streams, and thence to the lake, without first filtering through the dump and carrying unwanted material with it. Further we realize this is only a stop gap measure. The dump has a maximum life expectancy of five (5) years. Within that time we will secure s suitable site, outside the basin, for a new disposal area. It is possible that the site will be anywhere west of Twin Bridges but, most likely in the area south of Kyburz. Our Dump Maintenance Supervisor is working on this problem and, when a suitable site is secured and prepared a transfer station will be founded in the basin to facilitate hauling the refuse to the new area and the old dump will be properly covered and eliminated.

We have opposed, and will continue to oppose, the development of any shoreline areas in a manner that will create a health problem or will unnecessarily add to the threatened pollution of the lake. We have opposed the construction of additional Marinas, piers, or other structures that extend into the lake waters and may interfere with the natural circulation or movement of those waters.

It is this department's belief that, with the adoption of our recently compiled Water Quality Control Policy and the completion of remaining work along the same lines, we will have the necessary tools to do a complete, thorough, and satisfactory job of protecting Lake Tahoe and its connecting waters. The job is not complete, by any means, but a great amount of effort has been put forth and the results are visible and evident. Continued results can best be obtained by the cooperation of all agencies concerned and with the major responsibility remaining with the State and local units who are close to and familiar with the problem.

CHAIRMAN STEIN: Thank you. Are there any comments or questions?

(No response.)

CHAIRMAN STEIN: Thank you for a very constructive statement.

MR. FISHER: There will be no further witnesses from California. I would like to call my fellow Conferees' particular attention to the fact that the Lake Tahoe Regional Planning Commission and a number of the Placer County Board of Supervisors discussed these long-term plans and how implementation is occurring in regard to land, as well as water protection. I do want, in closing, Mr. Chairman, to state my own personal appreciation and that of the Governor for the very considerable work and preparation that has been done by each of the local counties and the relevant sanitation districts, and utility district . And I want to pay particular attention to those matters which are sort of interstate, Wally, the Council and the League to Save Lake Tahoe and, in addition, the enormous amount of work which has not been done by them but by engineering research. I suppose none of us ought to close this meeting without recognizing the contribution of something in excess, as I understand, of $200,000 that has been put in by the Fleichman Foundation to assist the State and the local communities in understanding the nature of the problems here on the basis of which many of the actions described by both States have proceeded. With that, Mr. Chairman, we have no further testimony.

CHAIRMAN STEIN: Do we have anything from any other Conferees before we terminate this portion of the conference?

MR. WHITE: No.

MR. SCHREEDER: No.

CHAIRMAN STEIN: I do think what we have done here is achieve a record. There was some references to earlier meetings by other boards. I think with all due deference to the other types of approaches, the kind of record you get in a conference of this kind where the Conferees are forced to come up with conclusions and recommendations sometimes makes for the best record.

I also want to join with Mr. Fisher and the other Conferees, Mr. White and Mr. Schreeder, in thanking you all for the contributions you have made. I think we will have, when the transcript is printed, a compilation of all existing views concerning the Lake Tahoe problem. I think those who have been here and who have listened have seen the development of this. In my mind, I think we now have, at least in one place, a clear delineation of the problem with all the divergent views presented that have not been in a single place before. The Conferees will, I am sure, read the prepared statements--those which have been condensed and those submitted for the record--because they will have the rest of the day and this evening.

The Conferees will go into Executive Session in the Emerald Bay Room which is across from here. It is a considerably smaller room. We will reconvene at 9:00 o'clock a.m. tomorrow. The Conferees expect to have a statement which will be made public about 12:30 tomorrow, and we will reconvene in the Emerald Bay Room.

This may be crowded. But I think the kind of session after the Conferees meet and have their announcement is generally a very short one, and I am sure we can accommodate all of those who wish to stay. As for those who can't, I would like to thank all of you for staying with us and for the hard work you have done in preparing the report and for your participation in the conference.

I think the Federal Government, at least, can say and I think possibly the states will agree with us, that the Lake Tahoe situation is a particularly difficult case and certainly one that is not usual. It is not the garden variety pollution case you usually see. You have this question of a future danger. I don't think anyone has contended that the water quality of that lake right now wasn't pretty good. You have the question of trans-basin shipment of water; you have the problem of interstate agencies; land development. I think we are agreed that whatever you do with the waste, the kind of treatment taken will probably be about the highest that is generally accepted in the country today.

With all these factors in a single case, we have these tremendous pulls. I think that if you will bear with us--I hope that the good humor of the Conferees will hold up during the Executive Session--we can produce an equitable accommodation. With that we will stand recessed and the next public meeting will be at 12:30 in the Emerald Bay Room tomorrow.

(Whereupon the Conference recessed until Wednesday, July 20, 1966)

WEDNESDAY, JULY 20, 1966, 3:05 PM

CHAIRMAN STEIN: May we reconvene? I am glad to see so many of you stayed with us. Mr. Leon Billings is here from one of the Congressional Committees (Senate Public Works Committee) from which we get our authority and most of our money. He actually may be the man to talk to.

One might expect people whose bosses are Governor Brown, Governor Sawyer and Secretary Udall to come up with an agreement. I will read that agreement - statement of the conferees.

(Whereupon copies were distributed to conferees, press and others present, after which Chairman Stein read the statement which follows):

At the call of the Secretary of the Interior pursuant to the provisions of the Federal Water Pollution Control Act, the States of California and Nevada and the Federal Water Pollution Control Administration have met for two days to express their interest and concern for the problems of water quality in the interstate waters of Lake Tahoe and its tributaries. The concern of this conference is reflective of the intense national interest in preserving the very special and precious work of nature that is Lake Tahoe.

The conferees commend Governor Edmund G. Brown of California and Governor Grant Sawyer of Nevada, the agencies of State Government, counties and local jurisdictions and the private agencies for their recognition of the problems of the basin and for their leadership in undertaking programs to deal with them.

Closing Statement - Mr. Stein

The conferees for the States of California and Nevada and the Federal Water Pollution Control Administration concur in the following findings and recommendations:

1. At the present time Lake Tahoe is not polluted nor contaminated, and constitutes a priceless natural resource which offers a unique experience to those who visit the basin.
2. There are recognizable long and short term threats of pollution to both Lake Tahoe and the lands and waters of the entire Lake Tahoe Basin. These threats basically are the result of the rapid development of the area to meet the needs of the ever-increasing human population which lives or visits Lake Tahoe.
3. The States of California and Nevada and local and Federal agencies have not only recognized these threats but have instituted a wide range of programs to deal with them.

The actions which have been undertaken will have the effect of protecting the natural resources of the Basin. Substantial progress has been made in pursuing these programs.

The key actions which have been taken include:

--The rapid planning and construction of sewage treatment and export facilities and the growing inclusion of applicable lands in the basin in sewage export districts.

--The application of State, Federal, and local agency financing to the construction of these facilities.

--The formation of a Joint Study Commission to develop a regional basin-wide agency for the most effective coordinated control of development in the Lake Tahoe Basin.

--The establishment of sound water quality standards for the Lake Tahoe Basin which are a milestone in interstate water quality standards.

4. Basin-wide objectives and standards for development and use of the lands and waters must be established within a framework which includes positive enforcement provisions covering not only the waters of Lake Tahoe, but its shoreline developments, and the total complex of lands and waters that make up the basin.

5. The States of California and Nevada should continue their legislative program directed to establishment of regulations leading to effective basin-wide development, control and coordination.

6. A basin-wide agency be established with adequate powers to prohibit development that would have an adverse effect on the quality of the waters of Lake Tahoe.

7. Developed lands within Lake Basin including both Federal and State owned lands where applicable and those lands which appear to be immediately susceptible to development be included within a sewerage district.

8. Districts aggressively pursue the plans now under way for export of sewage effluent from the Tahoe Basin. When such sewage exportation facilities have been constructed no development should be permitted within the Basin unless capable of being serviced to such facilities.

9. Sewage export from the Basin is to be achieved on a time schedule which will insure preservation of the water quality of Lake Tahoe and is to be completed by 1970. Such sewage shall receive a minimum of secondary treatment. The quality of effluent exported from the Basin shall be such that it does not adversely affect beneficial uses of the waters of the area of export.

10. All Federal, State and local agencies shall perform their functions in such a manner as to permit land development in the Lake Tahoe Basin to proceed without threat to the high quality of Lake Tahoe waters.

11. All Federal, State and local agencies should proceed immediately towards elimination of any discharge of wastes from water craft directly or indirectly into the waters of the Lake.

12. All Federal, State and local agencies adhere scrupulously to the water quality standards established by the States of California and Nevada for Lake Tahoe. Such standards have been submitted to the Secretary of Interior for his review and adoption under provisions of the Federal Water Pollution Control Act. This recommendation is not intended to restrict his discretion in that review and adoption process.

13. The proposed California-Nevada Interstate Water Compact negotiations covering the Lake Tahoe - Truckee, Carson and Walker River Basins, should be concluded as expeditiously as practicable, with representation from both States and the Federal Government, and should take cognizance of the need to export water out of the basin for water quality control.

14. Garbage should be exported out of the basin.

Additionally, conferees for the States of California and Nevada recommend that:

1. The construction of sewage export facilities be carried out as rapidly as possible, and that the Federal Government provide substantial financial assistance to solve the total waste disposal problems of the Lake Tahoe Basin in recognition of the intense nationwide interest in Lake Tahoe as a unique natural asset.
2. All future development of the shoreline be permitted by the U.S. Army Corps of Engineers only after concurrence of the State concerned, and when adequate water quality provisions are included as a condition of the permit.

Additionally, the conferee for the State of California recommends that no water be exported out of the Lake Tahoe Basin which would adversely affect the maintenance of water quality within the Basin.*

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*This paragraph was included in the Statement of Agreement read by Mr. Stein at the July 20th session. It was incorrect and amended accordingly.

(Whereupon Mr. Hugo Fisher called to the attention of the Conferees the fact that the last paragraph of the Statement of Agreement as read was in error and should have read as follows:)

"Additionally, the Conferee from the State of California recommends that export from the Tahoe-Truckee Basin for the purpose of water quality control should have priority over exports of water from the basin for any other purpose."

Upon the unanimous consent of the Conferees the Statement of Agreement was corrected accordingly and corrected copies were distributed.

CHAIRMAN STEIN: We would like to thank the Nevada and California representatives and all other parties. The road to Federal-State relationships is sometimes smooth and sometimes rough. I think you will agree with me that the advantage of the democratic process is after we toss our problems around enough, we generally can come to a formula acceptable to all. I think this is quite an achievement. I would like to thank all the others in attendance. We stand adjourned.

(Whereupon the Conference adjourned at 3:15 p.m.)

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